

IRV Code of Points Gym Wheel

2023+

Version 1.0

International Wheel Gymnastics Federation – IRV



Foreword

The IRV Code of Points (CoP) for gym wheel 2023+ contains substantial changes in the regulations for all disciplines in IRV gym wheel competitions.

The CoP gym wheel 2023+ replaces all previous versions of the gym wheel CoP and will be valid for all gym wheel competitions organised by the IRV as from 1st January 2023.

The IRV CoP 2023+ comes with an extensive online supplement containing videos, a database of difficulty elements and further explanations. We will provide more online materials over time.

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TABLE OF CONTENTS

I. GENERAL REGULATIONS (GR)

1. THE JUDGING PANEL	10
1.1. ORGANISATION	10
1.1.1. FULL JUDGING PANEL FOR INTERNATIONAL CHAMPIONSHIPS	10
1.1.2. REDUCED JUDGING PANEL FOR OTHER COMPETITIONS	10
1.1.3. USE OF HELPERS	10
1.2. GENERAL RIGHTS AND OBLIGATIONS OF THE JUDGES	10
1.2.1. PRE-REQUISITES FOR JUDGES AT INTERNATIONAL COMPETITIONS	10
1.2.2. BASIC RULES FOR JUDGES IN GYM WHEEL COMPETITIONS	11
1.2.3. CONDUCT OF THE JUDGES	11
1.2.4. JUDGES' MEETINGS	11
1.2.4.1. Before the competition	11
1.2.4.2. After the competition	12
1.2.4.3. In the case of big differences between the two middle scores	12
1.2.4.4. On the request of a judge	12
1.2.4.5. On the request of the head judge	12
1.2.4.6. In the case of a written protest	12
2. CODE OF CONDUCT FOR GYMNASTS AND COACHES	13
2.1. RIGHTS AND OBLIGATIONS OF GYMNASTS	13
2.1.1. FAIR PLAY	13
2.1.2. KNOWLEDGE OF THE CODE OF POINTS	13
2.1.3. COMPETITION CLOTHING	13
2.1.4. USE OF BINDINGS	13
2.1.5. USE OF BANDAGES AND HAND GUARDS	13
2.1.6. USE OF CHALK OR SIMILAR PRODUCTS TO IMPROVE GRIP	14
2.2. RIGHTS AND OBLIGATIONS OF THE COACHES	14
2.2.1. FAIR PLAY	14
2.2.2. SPOTTING A GYMNAST	14
2.2.3. KNOWLEDGE OF THE CODE OF POINTS	15
2.2.4. CONTACT WITH THE GYMNAST	15
2.2.5. COACHES' CLOTHING	15
2.3. MEASURES IF GYMNASTS OR COACHES DO NOT FULFIL THEIR OBLIGATIONS	15
2.3.1. UNRULY BEHAVIOUR	15
2.3.2. BREACH OF CLOTHING RULES	15
3. SCORING SYSTEM: GENERAL INFORMATION	17
3.1. TOTAL SCORE	17
3.2. JUDGING METHODS	17
3.2.1. EXECUTION JUDGES AND ARTISTIC IMPRESSION JUDGES	17
3.2.2. DIFFICULTY JUDGES	17
4. GENERAL RULES FOR CALCULATING THE FINAL SCORE	18
4.1. PERMITTED DIFFERENCE BETWEEN THE TWO MIDDLE SCORES	19
4.2. DETERMINING THE FINAL SCORE OF A ROUTINE	20
4.2.1. CHANGING INDIVIDUAL AND FINAL SCORES	20
4.2.2. CORRECTION OF THE FINAL SCORE / COMPETITION RESULT	21
5. THE EVALUATION OF ROUTINES AND VAULTS	22
5.1. REGULATIONS GOVERNING THE TASKS OF THE HEAD JUDGE	22
5.1.1. RIGHTS AND OBLIGATIONS OF THE HEAD JUDGE	22

5.1.1.1.	Starting/interrupting/terminating a routine or vault	23
5.1.1.2.	Neutral deductions	24
5.2.	REGULATIONS GOVERNING THE TASKS OF THE DIFFICULTY JUDGES.....	25
5.2.1.	RIGHTS AND OBLIGATIONS OF THE DIFFICULTY JUDGES.....	25
5.2.2.	CALCULATING THE DIFFICULTY SCORE IN VAULT	26
5.2.3.	CALCULATING THE DIFFICULTY SCORE IN STRAIGHT-LINE AND SPIRAL	27
5.2.3.1.	Calculating the technical score in straight-line and spiral	27
5.2.3.2.	Bonus for fulfilled structure groups	28
5.3.	REGULATIONS GOVERNING THE TASKS OF THE EXECUTION JUDGES.....	30
5.3.1.	RIGHTS AND OBLIGATIONS OF THE EXECUTION JUDGES	30
5.3.2.	GENERAL COMMENTS REGARDING THE EVALUATION OF EXECUTION	30
5.3.3.	TABLE OF GENERAL DEDUCTIONS IN EXECUTION	32

II. STRAIGHT-LINE (STL)

1.	THE STRAIGHT-LINE DISCIPLINE	34
2.	POSITIONING OF THE JUDGING PANEL IN STRAIGHT-LINE	35
3.	CODE OF CONDUCT FOR GYMNASTS AND COACHES	36
3.1.	SPECIFIC REGULATIONS FOR THE USE OF MATS IN STRAIGHT-LINE	36
4.	BEGINNING, INTERRUPTION AND TERMINATION OF ROUTINES IN STL	37
4.1.	BEGINNING AND END OF THE JUDGING PROCESS	37
4.1.1.	BEGINNING OF THE JUDGING PROCESS.....	37
4.1.2.	REGULATIONS FOR RESUMING A ROUTINE AFTER AN INTERRUPTION IN STRAIGHT-LINE.....	37
4.1.2.1	How the judges evaluate the interruption in Straight-Line.....	39
4.1.3.	END OF THE JUDGING PROCESS.....	40
4.1.3.1	Terminating a routine	40
5	THE EVALUATION OF ROUTINES IN STRAIGHT-LINE.....	41
5.1	LENGTH OF STRAIGHT-LINE ROUTINES	41
5.2	DEFINITION OF A JUDGING UNIT IN STRAIGHT-LINE	42
5.3	REGULATIONS GOVERNING THE TASKS OF THE DIFFICULTY JUDGE IN STRAIGHT-LINE.....	42
5.3.1	COUNTING DIFFICULTY IN STRAIGHT-LINE.....	42
5.3.1.1	Counting moves (units of difficulty) in straight-line.....	42
5.3.2	REQUIRED STRUCTURE GROUPS IN STRAIGHT-LINE	44
5.4	REPETITION OF MOVES AND ELEMENTS IN STRAIGHT-LINE AND EVALUATION BY THE JUDGES	45
5.4.1	DEFINITION OF MOVE AND ELEMENT REPETITION	45
	Centralised moves.....	45
	Decentralised moves.....	49
5.4.2	NOT COUNTED AS MOVE OR ELEMENT REPETITION	50
	Centralised moves.....	50
	Decentralised moves.....	52
5.4.3	EVALUATION BY THE JUDGES	54
5.4.3.1	Evaluation by the head judge.....	54
5.4.3.2	Evaluation by the difficulty judges	54
5.4.3.3	Evaluation by the execution judges.....	54
6	CATALOGUE OF DEDUCTIONS FOR STRAIGHT-LINE	55
6.1.	SPECIFIC DEDUCTIONS MADE BY THE EXECUTION JUDGES IN STRAIGHT-LINE.....	55
7.	REGULATIONS FOR STRAIGHT-LINE ROUTINES PERFORMED TO MUSIC	57
7.1.	GENERAL INFORMATION.....	57

7.1.1.	CHOICE OF MUSIC.....	57
7.1.2.	BEGINNING AND END OF THE JUDGING PROCESS	58
7.2.	REGULATIONS GOVERNING THE TASKS OF THE HEAD JUDGE	58
7.2.1.	MEASURING THE TIME AND EVALUATING THE CHOICE OF MUSIC.....	58
7.2.2.	LENGTH OF ROUTINES	59
7.2.3.	INTERRUPTING A ROUTINE WITH MUSIC	59
7.2.4.	TERMINATING A ROUTINE WITH MUSIC	59
7.3.	REGULATIONS GOVERNING THE TASKS OF THE DIFFICULTY JUDGES.....	60
7.3.1.	VARIATIONS OF DIFFICULTY ELEMENTS.....	60
7.3.2.	COUNTING OF DIFFICULTY ELEMENTS PERFORMED WITHOUT MUSIC	60
7.4.	REGULATIONS GOVERNING THE TASKS OF THE EXECUTION JUDGES.....	60
7.4.1.	VARIATIONS IN THE EXECUTION OF DIFFICULTY ELEMENTS	60
7.4.2.	CREATIVE ELEMENTS AND POSES.....	61
7.4.3.	EVALUATING ELEMENTS PERFORMED AFTER THE END OF THE MUSIC	62
7.5.	REGULATIONS GOVERNING THE TASKS OF THE ARTISTIC IMPRESSION JUDGES	62
	RIGHTS AND OBLIGATIONS OF THE ARTISTIC IMPRESSION JUDGES	62
7.6.	EVALUATION OF ARTISTIC IMPRESSION IN ROUTINES PERFORMED WITH MUSIC.....	62
	GENERAL INFORMATION	62
7.6.1.	DESCRIPTION OF EVALUATION CATEGORIES 2-7.....	63

III. SPIRAL (SPI)

1.	THE SPIRAL DISCIPLINE.....	68
2.	POSITIONING OF THE JUDGING PANEL IN SPIRAL	69
3.	BEGINNING, INTERRUPTION AND TERMINATION OF ROUTINES IN SPIRAL.....	70
3.1.	BEGINNING OF A ROUTINE	70
3.2.	INTERRUPTION OF A ROUTINE	70
3.2.1.	DEFINITION OF A FALL IN SPIRAL.....	70
3.2.2.	INTERRUPTION OF A ROUTINE WHEN THE WHEEL COMES UP INTO STANDING POSITION ON BOTH RIMS DURING THE ROUTINE	71
3.3.	CONTINUING A ROUTINE (AFTER INTERRUPTION).....	71
3.4.	END OF A ROUTINE	72
4.	THE EVALUATION OF ROUTINES IN SPIRAL	73
4.1.	LENGTH OF SPIRAL ROUTINES	73
4.2.	DEFINITION OF JUDGING UNITS IN SPIRAL	73
4.3.	GENERAL COMPOSITION REQUIREMENTS FOR SPIRAL ROUTINES	74
4.4.	SPECIFIC REGULATIONS GOVERNING THE TASKS OF THE DIFFICULTY JUDGE IN SPIRAL.....	74
4.4.1.	RECOGNITION OF A BIG SPIRAL	74
4.4.2.	RECOGNITION OF A SMALL SPIRAL	74
4.4.3.	RECOGNITION OF A VERTICAL SPIRAL	75
4.4.4.	NON-RECOGNITION OF A SPIRAL	75
4.4.5.	COUNTING DIFFICULTY IN SPIRAL	75
4.4.5.1.	Counting moves (units of difficulty) in big spiral.....	75
4.4.5.2.	Counting moves (units of difficulty) in small spiral	76
4.4.5.3.	Counting moves (units of difficulty) in vertical spiral	77
4.4.5.4.	Counting changes of direction	77
4.4.6.	REQUIRED STRUCTURE GROUPS IN SPIRAL	79
4.5.	MOVE REPETITIONS IN SPIRAL	80
4.5.1.	DEFINITION OF MOVE AND ELEMENT REPETITIONS AND REPETITIONS OF CHANGES	80
4.5.2.	CASES NOT COUNTED AS REPETITION	84
4.5.3.	EVALUATION BY THE JUDGES	87
4.5.3.1.	Evaluation by the difficulty judges.....	87

4.5.3.2. Evaluation by the execution judges	87
5. CATALOGUE OF DEDUCTIONS FOR SPIRAL	88
5.1. SPECIFIC DEDUCTIONS MADE BY THE EXECUTION JUDGES IN SPIRAL	88

IV. VAULT (VLT)

1. THE VAULT DISCIPLINE	91
1.1. GENERAL REGULATIONS	91
1.2. DESCRIPTION OF A VAULT	91
2. POSITIONING OF THE JUDGING PANEL IN VAULT	92
3. REGULATIONS GOVERNING WHEEL SIZES IN VAULT	93
3.1. DEFINITION OF CORRECT WHEEL SIZES	93
3.2. CHECKING OF WHEEL SIZES IN A COMPETITION	93
4. BEGINNING, INTERRUPTION AND TERMINATION OF VAULTS	95
4.1. BEGINNING OF THE JUDGING PROCESS	95
4.2. INTERRUPTION OF VAULTS	95
4.2.1. INTERRUPTION BY THE GYMNAST	95
4.2.2. INTERRUPTION BECAUSE OF AN OBSTACLE	95
4.3. END OF THE JUDGING PROCESS	96
5. THE EVALUATION OF VAULTS	97
5.1. SPECIFIC REGULATIONS GOVERNING THE TASKS OF THE HEAD JUDGE IN VAULT	97
5.2. NEUTRAL DEDUCTIONS MADE BY THE HEAD JUDGE IN VAULT	97
5.3. SPECIFIC REGULATIONS GOVERNING THE TASKS OF THE DIFFICULTY JUDGES IN VAULT	97
5.3.1. VAULT CATEGORIES	97
5.3.2. DEFINITION OF BODY POSITIONS AND RECOGNITION OF DIFFICULTY	98
5.3.3. RECOGNITION OF TWISTS	98
5.3.4. INVALID VAULTS	99
5.4. SPECIFIC REGULATIONS GOVERNING THE TASKS OF THE EXECUTION JUDGES	99
5.4.1. DEFINITION OF JUDGING UNITS FOR EXECUTION IN VAULT	99
Unit 1 – Setting wheel in motion, run-up	100
Unit 2 – Take-off, mounting phase	100
Unit 3 – Thrust with hands or feet from the wheel, flight phase	105
Unit 4 – Landing	105
6. CATALOGUE OF DEDUCTIONS FOR VAULT	106
6.1. SPECIFIC DEDUCTIONS MADE BY THE EXECUTION JUDGES IN VAULT	106
UNIT 2 - MOUNTING PHASE	106
UNIT 3 – FLIGHT PHASE	109
UNIT 4 – LANDING	110

APPENDIX

STL A1 DISCIPLINE DESCRIPTION: STRAIGHT-LINE	112
STL A2 CONCEPTUAL DEFINITION AND CATEGORISATION OF ELEMENTS.....	113
DEFINITION OF AN ELEMENT	113
CENTRALISED ELEMENTS	113
DECENTRALISED ELEMENTS	113
STL A3 CONCEPTUAL DEFINITION AND CATEGORISATION OF MOVES, UNITS AND LENGTHS.....	114
DEFINITION OF A MOVE IN STRAIGHT-LINE	114
DEFINITION OF A CENTRALISED MOVE IN STRAIGHT-LINE.....	114
DEFINITION OF A DECENTRALISED MOVE IN STRAIGHT-LINE.....	114
DEFINITION OF UNITS IN STRAIGHT-LINE.....	114
DEFINITION OF A LENGTH IN STRAIGHT-LINE	115
STL A4 PRINCIPLES OF BODY POSITIONING.....	117
STL A5 CATALOGUE OF TRANSITIONS IN STRAIGHT-LINE.....	117
START OF A ROUTINE	118
CHANGE OF POSITION IN UPRIGHT AND INVERTED POSITION	118
STL A6 EXPLANATION OF “ROLLING BACK” AND “EXTRA SWING”	126
ROLLING BACK IN CENTRALISED MOVES	126
COUNTING LENGTHS IN THE CASE OF DECENTRALISED MOVES	127
EXTRA SWING IN RELATION TO DECENTRALISED MOVES	128
STANDING SWING.....	129
DOUBLE STANDING SWING.....	130
STL A7 COUNTING DIFFICULTY VALUES IN STRAIGHT-LINE	131
SPI A1 DISCIPLINE DESCRIPTION: SPIRAL.....	132
SPI A2 MOVES AND ROUTINES IN SPIRAL	133
THE DEFINITION OF A “MOVE” IN SPIRAL.....	133
SPI A3 SPECIAL TRANSITIONS/UNITS IN SPIRAL (TRANSITIONAL UNITS).....	135
TRANSITION FROM BIG TO SMALL SPIRAL	135
TRANSITION INTO VERTICAL SPIRAL: SIDE FRONT SUPPORT WITH LEG CIRCLES	135
TRANSITION FROM SMALL SPIRAL TO STANDING.....	136
TRANSITION FROM BIG SPIRAL TO STANDING	136
TRANSITION FROM VERTICAL SPIRAL TO STANDING	137
TRANSITION FROM SMALL TO BIG SPIRAL	137
TRANSITION FROM VERTICAL TO SMALL SPIRAL	137
SPI A4 ROLLING ZONES.....	138
TIPPING THE WHEEL TO START THE ROUTINE	138
TIPPING THE WHEEL DURING THE ROUTINE	138
POSITION CHANGES AND TURNS IN AN UPRIGHT OR INVERTED POSITION IN BIG SPIRAL	138
POSITION CHANGES IN SMALL SPIRAL	138
CHANGES (OF DIRECTION).....	138
SPI A5 TIPPING DIRECTION OF THE WHEEL IN SPIRAL	139

“IN FRONT”139

“BEHIND”139

SPI A6 COUNTING DIFFICULTY VALUES IN SPIRAL.....140

I.

General Regulations (GR)

What's new?	
The head judge can apply neutral deductions from the final score for violations of the length of a routine.	see 5.1.1.2
The calculation of the final score follows a new structure with equal final scores for each discipline.	see 4
The difficulty score is divided into a technical score and a bonus for fulfilled structure groups.	see 5.2.3
E difficulties are introduced for straight-line and spiral	see 5.2.3
New structure groups are assigned to elements with a B difficulty or higher in straight-line and spiral	see 5.2.3.2
The execution judges only apply deductions for execution. They do not evaluate the composition of a routine.	see 5.3
New categories of execution deductions are introduced	see 5.3

1. THE JUDGING PANEL

1.1. Organisation

1.1.1. Full judging panel for international championships

All IRV competitions should operate with a full judging panel as follows:

- 1 head judge
- 2 difficulty judges
- 4 execution judges
- 4 artistic impression judges for routines performed to music

1.1.2. Reduced judging panel for other competitions

If **necessary** (e.g. lack of qualified judges), it is possible to have a judging panel with a minimum amount of only two execution judges, two artistic impression judges and one difficulty judge. In this case, one person can carry out the tasks of head judge and difficulty judge.

1.1.3. Use of helpers

The competition management may allocate trained helpers to assist the head judge in ensuring a quicker and more efficient implementation of the judging process. Judges who are registered to judge at the competition, but are not needed as judges, can be used to help in the organisation of the competition (e.g., line judges, checking wheel size, etc.).

1.2. General rights and obligations of the judges

1.2.1. Pre-requisites for judges at international competitions

- Must be in possession of a valid judging license at the highest level
- Must be able to document regular judging experience at national and/or international level

1.2.2. Basic rules for judges in gym wheel competitions

“All judges are obliged to evaluate all routines and vaults, regardless of the gymnast’s nationality, ethnicity, gender, religion, political or sexual orientation and previous achievements in competitions. Judges, as the authorities of a gym wheel competition, join the gymnasts and coaches in ensuring a fair and respectful competition environment.”

1.2.3. Conduct of the judges

All members of the judging panel are obliged to:

- Take part in the judging seminar(s) and judges’ meetings associated with a competition
- Arrive punctually at the judges’ meeting
- Prepare for their allocated task(s)
- Follow the defined dress code for judges

During the competition, judges must abide by the following:

- Must not leave their places
- Must not engage in conversation with coaches, gymnasts or other judges
- Must only use personal electronic devices (e.g. smart phones) in offline mode in order to look up details in the Code of Points

In the case of infringement of these rules, the competition judging officer will issue a warning. In the case of repeated infringement against these rules, the competition judging officer has the right to exclude the judge from international competitions. In addition, the competition management can exclude him/her from the current competition and charge his/her country or club a fine equivalent to the cost of paying for a missing judge (see Competition Rules).

1.2.4. Judges’ meetings

1.2.4.1. Before the competition

The judging officer responsible for the competition holds a meeting before the start of the competition to check that the planned head judges, difficulty judges, execution judges and artistic impression judges are present. If necessary, the judging officer appoints replacement judges or makes changes to the judging panels before announcing the final judging panels for the competition. The judging officer may also take the opportunity to

go through new rules, draw attention to potential problematic issues or answer questions from the judges.

1.2.4.2. After the competition

The judging officer will hold a meeting for the judges after the competition in order to discuss any problems or questions.

1.2.4.3. In the case of big differences between the two middle scores

The head judge **must** call a meeting for the execution judges if the difference between the two middle scores is too big.

1.2.4.4. On the request of a judge

The head judge **must** call a meeting if an execution judge or difficulty judge requests a meeting (e.g. by giving a hand signal) as a result of a specific incident. In this case, the head judge will instruct the judges to calculate and note down their scores before starting a discussion.

1.2.4.5. On the request of the head judge

The head judge **can** call a judges' meeting, if he/she thinks it is necessary. In this case, he/she will instruct the judges to calculate and note down their scores before entering into a discussion.

An example of this type of situation would be if the highest and/or lowest score is too far away from the middle score. No change of score is permitted in this case.

1.2.4.6. In the case of a written protest

On receipt of a written protest, a member of the competition management will ask the head judge to call a meeting with the judging panel as soon as possible. The head judge will then inform the judging panel about the protest. After receiving feedback from the judging panel, difficulty judges and execution judges, the competition management decides whether to accept or reject the protest.

2. CODE OF CONDUCT FOR GYMNASTS AND COACHES

2.1. Rights and obligations of gymnasts

2.1.1. Fair Play

All gymnasts must behave in a manner of fairness, politeness and respect towards other gymnasts, coaches, judges, and the competition management. All gymnasts must do their best to contribute to a smooth and efficient competition.

2.1.2. Knowledge of the Code of Points

All gymnasts should be well acquainted with the contents of the Code of Points and know the relevant rules for a competition.

2.1.3. Competition clothing

Participation in competitions is only permitted in competition clothing (see current IRV Competition Rules). It is particularly important that gym shoes are in good condition. See GR 2.3.2 for how to deal with a breach of the guidelines for competition clothing.

If a fall occurs due to broken shoes, the deductions for a fall will be applied, but the gymnast will be allowed to change shoes within a time limit of one minute.

2.1.4. Use of bindings

The gymnast must ensure that the bindings needed for a routine in straight-line or spiral are in good condition.

If a fall occurs due to broken bindings, the deductions for a fall will be applied, but the gymnast will be allowed to change bindings within a time limit of one minute.

2.1.5. Use of bandages and hand guards

The use of bandages and hand guards is permitted. The gymnast must make sure that these items are in good condition. If the use of bandages leads to deviations from the ideal body/arm/foot/hand etc. positions, the execution judges will apply the appropriate deductions.

2.1.6. Use of chalk or similar products to improve grip

The gymnast is permitted to use chalk (magnesium) or similar products to improve his/her grip on the wheel. However, it is important to ensure that products in powder form are applied outside the competition area. All products used must be fully removed from the wheel and floor by the gymnast or coach after the end of the routine.

In case of an interruption of a routine, the gymnast is permitted to apply additional chalk as long as he/she continues the routine within the given time limit of 30 seconds (see GR 5.1.1). The gymnast is also allowed to apply additional chalk between two vaults but must be ready as soon as the head judge gives the sign to start.

2.2. Rights and obligations of the coaches

2.2.1. Fair Play

All coaches must behave in a manner of fairness, politeness and respect towards other coaches, gymnasts, judges, and the competition management. All coaches must do their best to contribute to a smooth and efficient competition.

2.2.2. Spotting a gymnast

In order to avoid accidents, one coach may spot the gymnast during the course of a routine. The coach is permitted to enter the competition area for the duration of one move in straight-line and spiral, and for the dismount in straight-line. In vault, a coach must stand next to the wheel during each vault.

The competition area may be entered early enough for the coach to be able to spot the gymnast from the beginning of the relevant move or dismount. The coach must move quickly and efficiently into position and must exit the competition area in the same manner after the move has been completed. During the rest of the routine, the coach is permitted to be within the safety zone. Only one coach may be in the safety zone at any one time during a routine.

The coach must ensure that he/she does not block the view for the judges when spotting the gymnast.

After the dismount in straight-line, the wheel must be stopped from rolling away in an uncontrolled manner. The coach may touch the wheel as soon as the gymnast has released contact with it. It is also permitted for a team-mate or second coach to catch/stop a rolling wheel outside the safety zone after the dismount.

NB:

It is permitted for safety spotting to be carried out by two different coaches (e.g. one for a move, one for a dismount), but only one coach is permitted inside the competition area / safety zone at any one time. In vault, only one coach is allowed to spot the gymnast.

2.2.3. Knowledge of the Code of Points

All coaches must know the Code of Points, abide by the rules, and make sure that their gymnasts behave accordingly. Coaches are expected to contribute to the efficiency of a competition.

2.2.4. Contact with the gymnast

The coach may not communicate with the gymnast during a routine or vault (exceptions: a fall or interruption of the routine or between two vaults. Furthermore, the coach is not permitted to talk to the judges or technical assistants while a routine or vault is being performed.

2.2.5. Coaches' clothing

As long as a coach is within close quarters of the competition, he/she must wear suitable coach's clothing (tracksuit, inside sports shoes) (see IRV Competition Rules).

2.3. Measures if gymnasts or coaches do not fulfil their obligations**2.3.1. Unruly behaviour**

Coaches and gymnasts who behave in an unruly manner or break the rules can receive a warning from the competition management or the head judge and/or be excluded from the competition by the competition management (dependent on the severity of the rule-breaking). If a gymnast receives a warning or exclusion from the competition, the competition management must note down the reasons leading to the decision as a base for further discussion.

2.3.2. Breach of clothing rules

If a gymnast or coach appears at a competition in incorrect clothing and/or with incorrect shoes, the head judge, in agreement with the competition management can give the person in question a time limit to change and come back properly dressed.

- If a gymnast does not act on this, he/she can be excluded from the competition
- If a coach does not act on this, he/she can be asked to leave the immediate vicinity of the competition.

3. SCORING SYSTEM: GENERAL INFORMATION

3.1. Total score

The total score for a voluntary routine or vault is based on a combination of the following:

- Difficulty score
- Execution score
- Score for artistic impression in straight-line routines with music
- Neutral deductions made by the head judge

whereby:

- The difficulty judges evaluate the material worth (difficulty) of the routine.
- The execution judges evaluate technical performance and body positioning.
- The artistic impression judges evaluate the artistic impression of the routine.
- The head judge applies neutral deductions from the final score

3.2. Judging methods

3.2.1. Execution judges and artistic impression judges

Two methods of judging are possible for execution judges and artistic impression judges at all competitions:

Open scoring

On a signal from the head judge, the execution judges and artistic impression judges display their scores using manual scorecards or an electronic scoreboard. When using manual scorecards, the scores should be shown to the head judge first, before making them visible to the spectators.

Closed scoring

The judges write down their score on a piece of paper, which is given (or taken by a helper) to the head judge. The number of the judge as well as the number of the gymnast should be written on this paper. It is also possible to transmit the scores electronically to the head judge.

3.2.2. Difficulty judges

The difficulty score is calculated by the difficulty judges as quickly as possible and is displayed immediately to give the coach/gymnast the possibility to ask about non-recognition of moves.

4. GENERAL RULES FOR CALCULATING THE FINAL SCORE

The difficulty judges determine their score first and inform the execution judges about any details that are relevant for the execution score. They also inform the head judge about details regarding the composition of a routine that might result in neutral deductions. The difficulty judges then display the difficulty score.

The head judge calculates the execution score and the score for artistic impression (in music routines) as quickly as possible by writing down the individual scores of the execution judges and artistic impression judges (or dictating them to a helper).

The scores are entered into the competition list or computer system. If there are four execution judges, the execution score is calculated by discarding the highest and lowest scores. The head judge will then check the permitted differences between the two remaining scores (see GR 4.1). The arithmetic mean of the two middle scores will be the final execution score. If there are two judges, the arithmetic mean of the two scores will be the final execution score. The same applies to the score for artistic impression set by the artistic impression judges.

The final score for any routine performed without music (straight-line | spiral | vault) will be calculated by the head judge as follows:

$$\text{FINAL SCORE} = \text{difficulty score} + \text{final execution score} - \text{neutral deductions}$$

The final score for a straight-line routine performed to music will be calculated by the head judge as follows:

$$\text{FINAL SCORE} = \frac{\text{difficulty score} + \text{final execution score} + \text{final artistic impression score}}{2} - \text{neutral deductions}$$

Example:

Difficulty score: 8.6

Execution score: 6.8

Score for artistic impression: 5.4

Neutral deductions: -0.5

Calculation: $8.6 + \frac{6.8+5.4}{2} = 8.6 + 6.1 = 14.70$

Final score: $14.70 - 0.5$ (neutral deductions) = **10.20 points**

4.1. Permitted difference between the two middle scores

The point difference between the two middle scores for execution or artistic impression should not be greater than...

- 0.3 if the arithmetic mean is above 9.00
- 0.5 if the arithmetic mean is between 8.00 and 8.95
- 1.0 if the arithmetic mean is between 6.00 and 7.95
- 1.5 if the arithmetic mean is below 6.00

As long as the point difference is within the permitted area of tolerance, the head judge must calculate the execution score or the score for artistic impression using the two middle scores.

If the point difference is greater than described above, the head judge is obliged to call a judges' meeting. In the case of a judges' meeting, the judges explain their respective scores, or if necessary, re-calculate to give a new score. If the point difference is still too big after the judges' meeting, the head judge will set the final score for execution or artistic impression by calculating the arithmetic mean of the two middle scores. (NB: In this case, a note must be made in the competition list that the final execution score or the final score for artistic impression was set by the head judge.)

4.2. Determining the final score of a routine

4.2.1. Changing individual and final scores

Changing execution scores or scores for artistic impression

- If a judges' meeting is called because of too big a point difference between the two middle execution scores or the two middle scores for artistic impression, the execution judges or the artistic impression judges are allowed to change their scores after the meeting.
- If a judges' meeting is called before the execution judges or artistic impression judges have handed in their scores the judges are allowed to change their scores after the meeting.
- If a judges' meeting is called after the execution judges or music judges have handed in their scores and without the difference between the two middle scores being too big, the final execution score or the final score for artistic impression will not be changed. (Exception: mathematical mistake in the calculation of an execution score or score for artistic impression, see next bullet point).
- If a judge discovers a mistake in his/her calculation of an execution score or the score for artistic impression before the head judge has calculated and passed on the final score, the judge must inform the head judge immediately and submit his/her corrected execution score or score for artistic impression.
- After the head judge has calculated and passed on the final score, no change in the individual scores for execution or for artistic impression is permitted.

NB: It is not permitted for coaches/gymnasts to challenge the execution score or the score for artistic impression given by the judges.

Changing the difficulty score

If the difficulty judges discover a mistake in their calculation of the difficulty score, they can change the score after consultation with the head judge before the final score has been submitted by the head judge. After the head judge has calculated and passed on the final score, no change in the difficulty score is permitted.

Opportunity for the coach to challenge the difficulty score:

It is recommended for the gymnast to submit a detailed list of difficulty before the start of the competition (see guidelines for specific competition).

After the difficulty score is displayed by the judges, but before the final score is announced, the coach is permitted to approach the judges' table and ask which difficulty element(s) was(were) not recognised.

If all difficulty elements were recognised, the coach is permitted to ask the difficulty judges to check the calculation of difficulty one more time. In this case, the difficulty judges can check their calculation and, if necessary, make a correction to the difficulty score.

If the challenge by the coach is a question of interpretation (e.g. recognition or non-recognition of a difficulty element with regard to execution), the difficulty judges will reject the challenge and no further discussion is permitted.

If the coach has a major objection to the difficulty score the only remaining option is to submit an official written protest (see IRV Competition Rules for formal procedure). If the protest is successful, the difficulty score will be changed. A written protest can only be submitted if a difficulty list was handed in before the competition. The use of video footage is not permitted.

4.2.2. Correction of the final score / competition result

Correction of the final score

Correction of a gymnast's final score is necessary, if...

- ...there is an identifiable mistake in the head judge's calculation (e.g. incorrect calculation of the arithmetic mean of the two middle execution scores or the two middle scores for artistic impression, incorrect addition of the final scores).
- ...there is an identifiable mistake in the transfer of individual scores or final score in an electronic scoring system.
- ...a written protest against the difficulty score is successful

Correction of the competition result

A correction of the competition result is necessary, if...

- ...there is an identifiable mistake in the addition of a gymnast's final scores.
- ...there is an identifiable error in an electronic scoring system.
- ...there is an identifiable manual error in the result list.

5. THE EVALUATION OF ROUTINES AND VAULTS

The distribution of maximum available points for calculating the final score of a voluntary routine in spiral, straight-line without music or vault is as follows:

Difficulty: 10.00

Execution: 10.00

Maximum score: 20.00

The distribution of maximum available points for calculating the final score of a voluntary routine in straight-line performed to music is as follows:

Difficulty: 10.00

Execution & Artistic Impression: 10.00

Maximum score: 20.00

5.1. Regulations governing the tasks of the head judge

5.1.1. Rights and obligations of the head judge

General tasks

- The head judge is responsible for the correct and fair judging by his/her judging panel.
- The head judge should therefore judge the execution of each exercise independently (noting down the score) in order to have a point of departure for discussion in case of a judges' meeting.

Co-operation with the competition management

- The head judge is the link between the judges and the competition management and may summon the competition management to solve possible problems and disturbances.
- The head judge is accountable to the competition management for the work of the judging panel and the handling of any unforeseen situations that arise.

Other tasks

The responsibilities of the head judge include:

- Providing guidance to the judges regarding specific competition-related questions in order to ensure a correct score
- Checking the scores submitted by the judges, including the permitted difference between the two middle scores
- Controlling and calculating the correct final score

- Checking the correct entry of scores into the score sheets, or via electronic transmitting devices
- Setting his/her own execution score for use as a point of departure in case of a judges' meeting
- Calling the judging panel together for a judges' meeting
- Calling the judging panel together for the purpose of changing a score because of too great a difference between the two middle scores
- Giving a hand signal to the gymnast at the beginning and end of a straight-line or spiral routine and at the beginning and end of each vault
- Giving permission to repeat a routine (e.g. in the case of a technical defect, obstacle, or after consulting with the judges and competition management)
- Interrupting a routine if the wheel rolls out of the safety zone
- Controlling the time when applying the 30-second rule after a fall or interruption
- Postponing the 30-second rule and requesting information from the gymnast or coach
- Stopping a routine
- Applying neutral deductions from the final score
- Displaying/announcing/submitting the final score

5.1.1.1. Starting/interrupting/terminating a routine or vault

Starting a routine

The head judge gives the sign to start a routine or vault by raising his/her arm. The gymnast then must start with his/her routine within a time limit of 10 seconds (see each discipline for specific regulations of how to start a routine or vault).

Dealing with interruptions of a routine

An interruption may occur after a fall if the wheel rolls out of the safety zone or in the case of an obstacle or technical defect.

The head judge must interrupt a routine if the wheel rolls out of the safety zone (special case: straight-line to music, see STL 7.2.3).

The head judge should interrupt the routine by raising his/her arm and verbally informing the gymnast and coach about the interruption.

In case of an interruption due to the wheel rolling out of the safety zone, the head judge asks the gymnast to reposition his/her wheel in the competition area and continue with the routine. The execution judges will make the relevant deductions for rolling out of the safety zone (see GR 5.3.3).

The head judge will also interrupt the routine in cases where an obstacle blocks the path of the gymnast during a straight-line or spiral routine or vault (e.g. another gymnast, wheel, photographer, etc.). In such cases, no deductions will be made by the judging panel and the gymnast is allowed to restart the routine from the point of interruption.

The 30-second rule

The gymnast must resume his/her routine within a maximum of 30 seconds after the interruption. The time left for the gymnast will be announced by the head judge in 10-second intervals. An exception will be made in cases where the interruption is caused by an obstacle. In such a case, the obstacle needs to be removed before the gymnast can continue with his/her routine. For further regulations governing the interruption of a routine, see the specific sections for each discipline.

Terminating a routine

The head judge is obliged to stop a routine after three occurrences of the following incidents (either three of the same incident, or a combination of incidents):

- fall
- assistance from the coach
- wheel rolling out of the safety zone

The head judge must stop the routine by raising his/her arm and verbally asking the gymnast to perform a finishing pose. The judging panel will stop the judging process immediately. The gymnast must show a finishing pose to end the routine. The finishing pose will not be evaluated by the judging panel, but not performing a finishing pose will lead to a deduction for a missing finishing pose.

If the gymnast does not continue the routine within 30 seconds after an interruption, the head judge will terminate the routine.

The head judge will also stop the routine if the gymnast attempts to change wheel after he/she has started the routine. A change of wheel is only allowed between two vaults.

In cases where the gymnast does not react to the head judge, the judging panel will stop judging in line with the instructions of the head judge.

For further regulations governing the conditions of when to terminate a routine, see the specific sections for each discipline.

5.1.1.2. Neutral deductions

The head judge will make neutral deductions from the final score in the following cases:

In straight-line and spiral, routines are required to have a minimum and a maximum length. These requirements can be found in the sections for straight-line (see STL 5.1) and spiral (see SPI 4.1). The difficulty judges will inform the head judge in cases where the length of the routine is incorrect. The head judge will make neutral deductions from the final score if a routine is too short or too long.

In vault, the head judge will apply a neutral deduction, if the gymnast uses a wheel that is too small.

In all three disciplines, the head judge will apply a neutral deduction if the gymnast does not start the routine within 10 seconds after being given the sign by the head judge.

The following deductions will apply:

	-0.1	-0.3	-0.5	-1.0
missing move (in straight-line and spiral)				per move
too many moves (in spiral)		per move		
missing dismount (in straight-line)			X	
music too short or too long (in straight-line to music)			X	
gymnast uses a wheel that is too small (in vault)				X
gymnast needs more than 10 seconds to start the routine or vault after signal from the head judge				X

5.2. Regulations governing the tasks of the difficulty judges

5.2.1. Rights and obligations of the difficulty judges

General tasks

- The difficulty judges are responsible for calculating the difficulty score of a routine or vault. A maximum difficulty score of 10.00 points is possible for each discipline.
- It is the duty of the difficulty judges to evaluate all routines correctly, efficiently and independently.
- The difficulty judges must follow the instructions of the head judge.
- They must be ready when the head judge signals the beginning of the routine.

Documentation of the routine/vault

- Both difficulty judges are obliged to write down the technical score of the routine as well as the given bonus for fulfilled structure groups in spiral and straight-line, and to compare their evaluations.
- The difficulty judges compare the resulting difficulty score of the routine or vault with the difficulty list ("pocket card") submitted by the gymnast. This serves as a point of departure for solving any problematic issues.
- The difficulty judges determine the difficulty score of the routine or vault and display/announce the result.

Determining and communicating the recognition or non-recognition of difficulty elements

- The difficulty judges determine the length of a routine in spiral and straight-line (watching out for repetitions!) and communicate this to the head judge, making it clear if the routine contained too few or too many moves or too many lengths.
- They inform the execution judges in cases where the recognition or non-recognition of difficulty influences the deductions for execution (e.g. hip angles in vault, recognition of a small spiral, etc.).
- If the difficulty judges do not agree, Difficulty Judge 1 decides the difficulty score.
- If the difficulty judges do not agree with the execution judges (e.g. in the case of recognition of a small spiral), the decision regarding recognition or non-recognition is the responsibility of the difficulty judges, or Difficulty Judge 1.

Co-operation with the head judge

- The difficulty judges support the head judge in his/her activities and make him/her aware of violations of the regulations (e.g. the interruption of routines as a result of a fall or the wheel rolling out of the safety zone).
- The difficulty judges have an advisory role in relation to the head judge, but do not make any decisions that are the responsibility of the head judge.
- The difficulty judges do not have the right to initiate a judges' meeting or lead discussions resulting from differences of opinion. However, the head judge may ask the difficulty judges for advice in a discussion.
- If there is a disagreement between the head judge and a difficulty judge regarding the recognition/non-recognition of difficulty, the final decision is the responsibility of the difficulty judges, or Difficulty Judge 1.

5.2.2. Calculating the difficulty score in vault

In the vault discipline, the calculation of difficulty is based on the catalogue of vaults and is further described in detail in the vault section of this document.

In the Vault discipline, the gymnast performs two vaults. These two vaults may be the same or different. Each vault will be judged independently.

In IRV competitions, the better score of the two vaults performed will be the final score.

5.2.3. Calculating the difficulty score in straight-line and spiral

The difficulty score (max. 10 points) in straight-line and spiral consists of a technical score (max. 8 points) and a score for fulfilled structure groups (max. 2 points):

Difficulty Score (max 10) =
technical score (max 8) + fulfilled structure groups (max 2)

5.2.3.1. Calculating the technical score in straight-line and spiral

All elements listed in the difficulty catalogues for straight-line and spiral are categorized as 0, A, B, C, D, or E difficulties, whereby 0 elements have no difficulty value and E elements have the highest difficulty value (1.0 point).

Difficulty values among elements are distributed as follows:

0	A	B	C	D	E
0.0	0.2	0.4	0.6	0.8	1.0

To calculate the technical score of a routine, the eight highest difficulty elements are counted, regardless of whether they are 0, A, B, C, D or E. This rule applies to spiral routines, straight-line routines and straight-line routines performed to music. Additional difficulty will not be counted. The order in which the difficulty elements are performed does not have an impact on the calculation of the technical score. Further information on how to count difficulty can be found in the Appendix (STL A7 and SPI A6).

Example:

A gymnast performs a routine containing the following difficulty elements:

A	A	C	D	E	D	C	B	A	B	C	D
---	---	---	---	---	---	---	---	---	---	---	---

The eight highest difficulty elements will be counted for the difficult score:

A	A	C	D	E	D	C	B	A	B	C	D
---	---	---	---	---	---	---	---	---	---	---	---

The technical score is calculated as follows:

$$1 \times E = 1.0$$

$$3 \times D = 2.4$$

$$3 \times C = 1.8$$

$$1 \times B = 0.4$$

Technical score: = 5.6 points

5.2.3.2. Bonus for fulfilled structure groups

In addition to the difficulty values of the elements, the number of fulfilled structure groups will be counted. For each fulfilled structure group the gymnast will receive a bonus of 0.2 points from the difficulty judges. For straight-line and spiral a total of 10 structure groups exist for each discipline. The structure groups are listed in the specific sections for straight-line and spiral. Structure groups are only assigned to elements with B difficulty or higher. A elements do not have a structure group.

NB:

Element combinations within one judging unit can cover various structure groups. This means that by performing one move a gymnast can fulfil one or more structure groups!

The bonus for a certain structure group can only be awarded once. Performing more moves from the same structure group will not be rewarded by an additional bonus.

Each structure group may only be shown three times within a voluntary routine. Performing moves from the same structure group more than three times will lead to non-recognition by the difficulty judges.

Example 1:

A	A	C	D	E	D	C	B	A	B	C	D
I	IV	II	X	VII	I	II	VI	V	IV	IX	X

Structure groups fulfilled: I, II, IV, V, VI, VII, IX, X

Bonus awarded: 1.6 points

This means that the final difficulty score for this routine will be:

$$1 \times E = 1.0$$

$$3 \times D = 2.4$$

$$3 \times C = 1.8$$

$$1 \times B = 0.4$$

Technical score: = 5.6 points

Bonus for fulfilled structure groups: 1.6 points

Difficulty score: 7.2 points

Example 2:

A	B	D	D	E	C	C	A	D	D	E	A
I	I	III	III	X	IV	III	V	VI	III	VII	X

In this case, structure group III is shown four times. This means that the last move of structure group III, a D element, will not be included in the technical score. The B element will be included instead.

Structure groups fulfilled: I, III, IV, V, VI, VII, X

Bonus awarded: 1.4 points

The difficulty score for this routine is therefore calculated as follows:

$$2 \times E = 2.0$$

$$3 \times D = 2.4$$

$$2 \times C = 1.2$$

$$1 \times B = 0.4$$

Technical score: = 6.0 points

Bonus for fulfilled structure groups 1.4 points

Final difficulty score: 7.4 points

5.3. Regulations governing the tasks of the execution judges

5.3.1. Rights and obligations of the execution judges

General tasks

- The execution judges are responsible for evaluating the execution of a routine or vault. A maximum execution score of 10.00 points is possible for each discipline.
- It is the duty of the execution judges to evaluate all straight-line / spiral routines or vaults correctly, efficiently, and independently.
- The execution judges must follow the instructions of the head judge and difficulty judges.
- They must be ready when the head judge signals the beginning of the straight-line / spiral routine or vault.

Determining and documenting deductions

- The execution judges document their deductions per judging unit in order to be able to explain their scoring in case of a judges' meeting.
- The execution judges adjust their scores according to the difficulty judges' decisions regarding recognition or non-recognition of moves or vaults.

5.3.2. General comments regarding the evaluation of execution

The maximum score of **10.0** for execution can only be achieved if the gymnast performs all moves or a vault with a high degree of aesthetic and technical mastery. All deviations from the ideal execution and all technical faults will lead to deductions by the execution judges.

The routine must be performed within the marked competition area. If this is not the case, deductions will be made from the execution score.

If the deductions for execution add up to more than 10.0, it is not possible to make further deductions. Any additional deductions will not be taken into consideration.

For the purpose of evaluating execution, a straight-line / spiral routine or vault is divided into judging units. All execution deductions are made within these judging units. The judging units are defined for each of the three disciplines and can be found in the related sections of this document.

All deductions are divided into the following four different categories:

minor deduction	medium deduction	major deduction	fall/assist by coach
-0.1	-0.3	-0.5	-1.0

For each judging unit, a maximum of 1.0 point can be deducted, even if the sum of individual deductions would exceed 1.0 point. This means that minor, medium and major deductions can be summed up to a maximum of 1.0 point. For example, one minor, one medium and one major deduction can be applied in the same judging unit, resulting in a total deduction of 0.9 for the unit. Within each judging unit, multiple deductions can be applied for the same body parts. For example, if the gymnast bends his/her knees twice during the same centralised move in straight-line or spiral, two medium deductions will be applied by the execution judges. If a fall or assistance from a coach occurs, 1.0 point will be deducted and all other deductions within this judging unit will be deleted.

5.3.3. Table of general deductions in execution

The following deductions apply to all three disciplines. Tables with specific deductions for each discipline can be found in the related sections of this document.

	-0.1	-0.3	-0.5	-1.0
Incorrect head positioning	X (minor correction)	X (major correction)		
Incorrect hand positioning	X			
Incorrect arm positioning		X		
Incorrect foot positioning	X			
Incorrect leg positioning		X		
Incorrect hip positioning		X		
Faults when placing the feet in a new position on the wheel	X (minor correction)	X (major correction)		
Deviations from the ideal pike position (if recognized by the D-judges)		X ($>15^\circ$)	X ($>30^\circ$)	
Deviations from the ideal split position (180°) in moves requiring a split position (if recognized by the D-judges, if the D-judges do not identify a split position leading to a downgrading of the move, no deduction in execution will be applied)			X ($>30^\circ$)	
Touching the floor with a hand or foot (NB: some moves require touching the floor!)		X		
Arm or foot support on the floor to avoid a fall			X	
Fall during a routine (see specific regulations for each discipline!)				X
Assistance from a coach (also verbal cues!)				X
The wheel rolls out of the competition area but stays within the safety zone (deduction is made for the entire routine)		X		
The wheel rolls out of the safety zone			X	
Missing finishing pose		X		

II.

Specific Regulations for Straight-Line (STL)

What's new?	
The gymnast no longer must show a dismount after termination of the routine by the head judge.	see GR 5.1.1.1
New structure groups are introduced for the evaluation of difficulty for elements with a B difficulty or higher	see 5.3.3
The new regulations for evaluating artistic impression replace the previous version of the IRV music regulations.	see 7

1. THE STRAIGHT-LINE DISCIPLINE

In straight-line, the wheel is set in motion on both rims. The imaginary lines traced by the rims in contact with the floor are parallel.

In straight-line, centralised or decentralised elements can be performed by the gymnast.

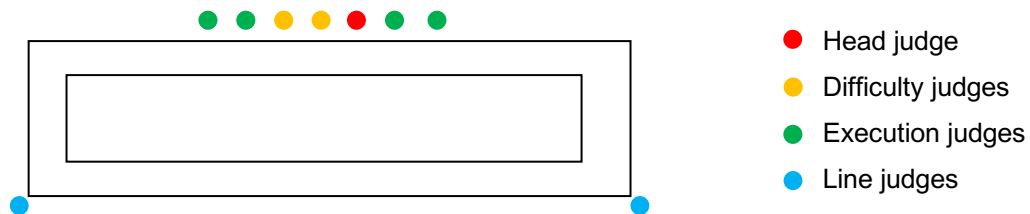
In **centralised** elements, the centre of body mass remains mainly in the middle of the wheel throughout the element and/or the points of contact between the gymnast and the wheel are wide apart.

In **decentralised elements**, the centre of body mass is mainly at the edge of the wheel throughout the element and/or the points of contact between the gymnast and the wheel are close together. Decentralised elements are performed in an upper or lower phase. In the upper phase the main part of the body mass is above the horizontal axis through the middle of the wheel, while in the lower phase it is below this horizontal axis.

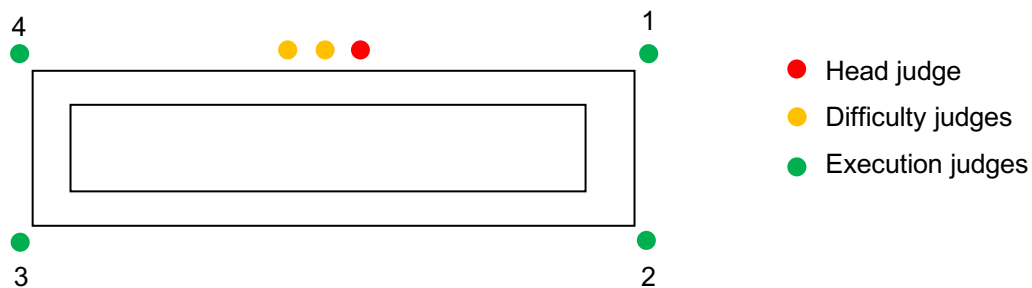
Straight-line routines can be performed with or without music (see IRV Competition Rules).

2. POSITIONING OF THE JUDGING PANEL IN STRAIGHT-LINE

The judging panel is usually positioned in a row. In this case, two line judges can be used to give a signal if the gymnast rolls out of the competition area or safety zone (by way of a hand signal, flag, or similar).



It is also possible to place the execution judges at the corners of the competition area, outside the safety zone (see below). In this case, no line judges are necessary.



3. CODE OF CONDUCT FOR GYMNASTS AND COACHES

3.1. Specific regulations for the use of mats in Straight-Line

The gymnast is permitted to use a mat or crash mat for landing from his/her dismount. The mat must be placed outside the competition area before the gymnast starts his/her routine. It can be inside or outside the safety zone but should be positioned such that it cannot come into contact with the wheel during the routine.

From the second-to-last length of the routine, a maximum of 4 helpers can push the mat into the competition area from the side or from in front of the wheel, so that it is ready for the dismount. The helpers are permitted to stay by the mat in order to make sure it is stable and to make any small adjustments immediately before the dismount.

It is strictly forbidden to carry or pull/push the mat behind the rolling wheel or to move it within the safety zone in order to get it to the other end of the competition area. It must be positioned in such a way that it is only possible for the wheel to come into contact with the mat after the gymnast has landed.

If the wheel touches the mat before the gymnast has landed, the appropriate deductions will be made by the execution judges.

4. BEGINNING, INTERRUPTION AND TERMINATION OF ROUTINES IN STL

4.1. Beginning and end of the judging process

4.1.1. Beginning of the judging process

The gymnast waits in bindings for the head judge to give a sign to start the routine. After the signal from the head judge, the gymnast has a time limit of 10 seconds to start the routine. If the gymnast chooses to start without bindings, he/she should be ready to start as soon as the head judge gives the sign.

The judging process of a straight-line routine without music begins with the gymnast voluntarily setting the wheel in motion after receiving the signal from the head judge. In straight-line routines with music, the judging process starts with the start of the music.

See STL 7.1.2 for specific regulations governing the beginning of a straight-line routine to music.

4.1.2 Regulations for resuming a routine after an interruption in straight-line

When resuming (continuing) a straight-line routine after an interruption, it is necessary to differentiate between the following cases:

- Resuming a routine with a move in one or both bindings
- Resuming a routine with a centralised move without bindings
- Resuming a routine with a decentralised move

The following points apply when resuming a straight-line routine with a move in one or both bindings, or with a centralised move without bindings.

- The gymnast or coach can reposition the wheel according to the general regulations.
- The gymnast puts one or both feet into the binding(s).
- The gymnast continues the routine without the help of a coach: The gymnast sets the wheel in motion independently, e.g. by way of a side stride position, single or double standing swing (for the definition of a standing swing, see Appendix STL A6).
- The gymnast continues the routine with the help of a coach: The coach can help the gymnast into the desired starting position (e.g. giant bridge). In this case, the coach is

allowed to re-grasp the wheel several times or slide his/her hands along the rim of the wheel, before letting go and allowing the gymnast to continue independently.

Judges:

No deductions are made when the gymnast resumes the routine with the help of a coach. The judges will resume judging with the next independently performed move or transition.

The following applies when resuming a straight-line routine with a decentralised move without bindings:

- Option 1 - Resuming the routine independently:

The gymnast can grasp the wheel rims/handles/rungs from a standing position on the floor/rims or rungs/handles. In particularly big wheels the gymnast is permitted to jump into position from where he/she is standing.

- The gymnast can then continue directly with an upper phase (e.g. roll through the arms backwards, tuck stand on the upper board) followed by a lower phase and then the rest of the routine.

Judges:

The execution and difficulty judges resume judging immediately.

- The gymnast uses a transition of his/her choice (stepped, tucked...) to achieve the desired standing position (e.g. stride stand on the boards). Using a single or double standing swing, the gymnast executes the desired upper phase in order to continue his/her routine.

Judges:

The execution judges do not make minor deductions for the standing swing.

Exception: If the gymnast falls again, there will be another 1.0 deduction.

If the gymnast uses more than a double standing swing, a major deduction will apply.

The difficulty judges resume judging immediately.

- Option 2 - Resuming the routine with the help of the coach:

- The coach holds the wheel while the gymnast gets into position for an upper phase.
- The coach "pulls" the gymnast into an upper phase, whereby the wheel completes approximately half a rotation and the coach can use his/her feet on one or more rungs to assist the pulling action. The coach can also re-grasp the wheel several times and slide his/her hands along the rims.

Judges:

No deductions are made when the gymnast resumes the routine with the help of a coach. The judges will resume judging with the next independently performed move or transition.

Positioning of the wheel when resuming the routine / change of direction / new length:

The rolling direction of the wheel when resuming a routine after an interruption can be as follows:

- The gymnast resumes the interrupted routine (if applicable, after having rolled the wheel back one rotation) such that he/she continues in the same direction as the wheel was rolling before the interruption. This is also valid if the interruption happened in the upper phase at the end of a length. In this case, the difficulty judges will not count a new length.
- The gymnast resumes the interrupted routine such that he/she continues in the opposite direction to which the wheel was rolling before the interruption or rolls the wheel back more than one rotation. In these cases the difficulty judges will count a new length.

Before resuming his/her routine, the gymnast or coach can ask the difficulty judges whether or not the difficulty of the skill performed when the interruption occurred was recognised.

4.1.2.1 How the judges evaluate the interruption in Straight-Line

- If the move was not recognised:
 - The move is not included in the difficulty score or structure groups.
 - If the move is at the beginning of a length, it will not be counted as a new length, i.e. it is not relevant when calculating the permitted number of lengths in the routine.
 - If the move where the interruption occurred was in the middle or at the end of a length, this length will be counted as one of the lengths in the routine.
- The execution judges resume their evaluation of the routine as soon as the gymnast is performing independently again (see regulations in STL 4.1.2).
- The difficulty judges resume their evaluation of the routine ...
 - ...when the gymnast continues the routine with a centralised move after gathering momentum independently or making use of an independent standing swing (single or double).

- ... in the upper phase, if this is achieved by the gymnast without the help of a coach.

Comment: Decentralised moves whose difficulty is in the lower phase will only be recognised if the preceding upper phase is achieved by the gymnast without the help of a coach.

- Elements performed with the help of a coach in order to get into position for continuing the routine will not be counted in the difficulty score and no deductions will be made for execution.
- If the gymnast starts the routine from the beginning or repeats parts of the routine, the following will apply: The repeated moves will not be counted towards the difficulty score if they have already been recognised by the difficulty judges. However, they will be counted towards the permitted number of lengths and structure groups in the routine. The execution judges will deduct for faults in execution.

In all cases, the gymnast must resume with his/her routine within a maximum of 30 seconds after the interruption occurred (see GR 5.1.1).

For specific regulations governing the interruption of routines with music see STL 7.2.3.

4.1.3 End of the judging process

The judging process ends...

- ...with the gymnast performing a finishing pose with legs together after landing from the dismount.
- ...if the gymnast does not continue a routine within 30 seconds after an interruption.
- ... if the head judge stops the routine and the gymnast has performed a finishing pose as requested.

4.1.3.1 Terminating a routine

In addition to the general regulations the head judge must terminate a routine in straight-line without music in the following cases:

- If the gymnast rolls back a third time in a centralised unit
- After a third extra swing (see Appendix STL A6 for definition of extra swings).

For specific regulations governing the termination of routines with music see STL 7.2.4.

5 THE EVALUATION OF ROUTINES IN STRAIGHT-LINE

5.1 Length of straight-Line routines

A voluntary routine in straight-line comprises at least 8 moves, maximum 6 lengths and a dismount. The dismount must occur at the latest in the 6th length (without an additional change of direction). The required minimum number of moves must be achieved without repetitions.

- If too few moves are performed, the relevant neutral deductions will be made by the head judge.
- If the gymnast repeats moves, they will not count towards the minimum requirement of 8 moves, and the relevant neutral deductions will be made by the head judge.

The following deductions will apply:

	-0.1	-0.3	-0.5	-1.0
gymnast performs less than 8 moves				X (per move)
gymnast needs more than 10 seconds to start the routine after signal from the head judge (exception for STL-M see STL 7.1.2)				X

- If moves or the dismount are performed in or after the 7th length, the difficulty and the dismount will not be counted.
- The execution judges will evaluate all moves, even if they are performed after in or after the 7th length.

In all cases, the difficulty judges will inform the head judge about the number of missing moves or additional lengths in the routine.

For regulations governing the length of voluntary straight-line routines with music, see the specific regulations in STL 7.1.

5.2 Definition of a judging unit in straight-line

For the purpose of evaluating execution, a routine is divided into judging units.

A judging unit in straight-line consists of a preceding transition together with the subsequent move (see Appendix STL A3).

In the case of decentralised elements, not all moves will consist of an upper and lower phase. The following upper phases are thus considered to be units in their own right:

- An upper phase immediately preceding a centralised move or centralised change of direction, even if the centralised part does not comprise a complete wheel rotation (e.g. free knee swing (=upper phase), bridge forwards (=centralised move))
- An upper phase immediately preceding a dismount
- The dismount is a unit in its own right.

5.3 Regulations governing the tasks of the difficulty judge in straight-line

5.3.1 Counting difficulty in straight-line

The counting of difficulty in straight-line follows the general regulations for the counting of difficulty as described in the general part of the Code of Points (see GR 5.1).

As mentioned above, the difficulty of moves performed in or after the 7th length of a routine will not be considered for the difficulty value.

5.3.1.1 Counting moves (units of difficulty) in straight-line

In straight-line, difficulty values are linked to moves, stand-alone upper phases and dismounts. Difficulty judges count in the following manner:











- For centralised moves, a difficulty value is linked to one rotation of the wheel.
- In decentralised moves, a difficulty value is linked to an upper phase with a subsequent lower phase. If the upper phase is performed as a change of direction (i.e. the lower phase takes place in a new rolling direction), the whole move counts as part of the new length. The difficulty value of the decentralised move is the highest of the values of the move's upper and lower phase.
- If a centralised move is performed directly after an upper phase, the element(s) in the upper phase will have a difficulty value in their own right and the subsequent

centralised move will also have its own difficulty value, whereby it is possible that the element(s) in the upper phase can upgrade the difficulty value of the centralised move (see straight-line difficulty catalogue).

- If the gymnast performs a centralised change of direction or walks in the wheel directly after an upper phase, this upper phase will have its own difficulty value.
- If the gymnast performs a dismount directly from an upper phase, the upper phase and dismount will have two separate difficulty values, whereby it is possible that the element in the upper phase can upgrade the value of the dismount (see straight-line difficulty catalogue).

5.3.2 Required structure groups in straight-line

Structure groups are only assigned to elements with B difficulty or higher. A elements do not have a structure group.

I	moves or element combinations in bindings (minimum B difficulty)	
II	centralised moves without bindings	
III	high rolls	
IV	hip circles	
V	other circles (e.g. knee circles, back circles, elbow circles, seat circles)	
VI	moves and element combinations with free hanging elements and/or knee swings	
VII	moves and element combinations with a tuck over	
VIII	static moves	
IX	moves with difficulty in lower phase	
X	special dismounts	

5.4 Repetition of moves and elements in straight-line and evaluation by the judges

Routines should be constructed such that no moves or elements are repeated. A move can be counted as a repetition even if there are small differences in execution or body positioning. It is therefore necessary to define exactly what is and what is not counted as repetition.

Repetition occurs if a move or element is performed two or more times in the course of a routine.

In the following cases, move or element repetition occurs if there is no change in difficulty between the variations.

5.4.1 Definition of move and element repetition

Centralised moves

a. Performing the same element combination with different transitions without a change in difficulty [no change in difficulty = REPETITION]
--

Examples

Element combinations in bindings:

the gymnast performs the same elements, the first time with a change of grip, and the second time by turning under one arm

Handstand:

the first time with the legs in a tuck position during the jump, the second time with the legs in a straddle position

From a free knee swing forwards into a bridge forwards:

the first time as a stepped variation, the second time with legs together

b. Performing the same move or element combination with different standing or holding zones [no change of difficulty = REPETITION]
Examples
Giant (rim) bridges without bindings:

giant rim bridge backwards, the first time standing on the back board, the second time standing on a rung (or other equivalent standing and holding positions on the wheel)

Handstand:

handstand variations with different standing and holding positions on the wheel

From hip hang with jump from the floor backwards into high front support backwards:

the first time standing on a rung handle, the second time standing on a stride rung

c. Performing the same move or element combination, once holding a rung, board or rung handle, and once holding the wheel rims [no change of difficulty = REPETITION]
Example
Giant (rim) bridges without bindings:

giant bridge standing on the back board and giant rim bridge standing on the back board (or other standing positions in the wheel, where the only difference is that the gymnast is holding a rung, board or rung handle on the first occasion and the wheel rims on the second occasion).

d. Performing the same move or element combination with different types of grip [no change of difficulty = REPETITION]
Example
Front support forwards:

the first time with overarm grip, the second time with underarm grip

e. Performing the same move, once at the end of a length and once in the middle of a length [no change of difficulty = REPETITION]

Example

From free knee swing forwards into bridge forwards:

the first time as a change of direction, the second time in the middle of a length

f. Performing handstands and bridges without bindings standing on one or two feet [no change of difficulty = REPETITION]

Examples

Handstand:

jumped handstand variations, the first time with a two-footed take-off and landing, the second time with a one-footed take-off and landing

Giant bridges without bindings:

giant (rim) bridge backwards standing on two feet and giant (rim) bridge backwards standing on one leg with the other leg bent and the free foot against the opposite knee

g. Performing element combinations without bindings that combine different decentralised elements with the same centralised element [no change in difficulty = REPETITION]

Examples

If the decentralised element does not result in a change in difficulty for the centralised part of the element combination, this will be counted as **repetition**.

From hip hang with take-off from the floor backwards into a high front support backwards:

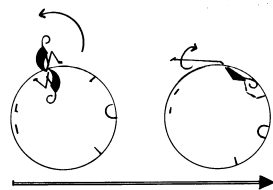
The high front support can only be counted once as a C and once as a D, regardless of the preceding element in the upper phase.

From a free knee swing forward into a bridge forward:

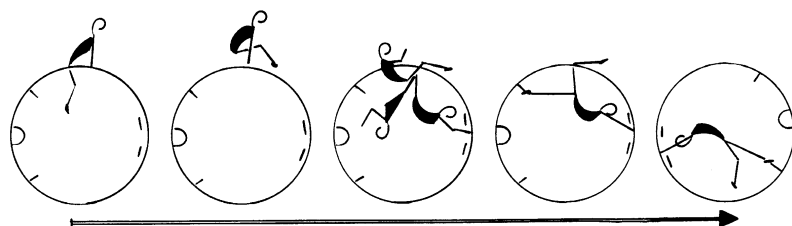
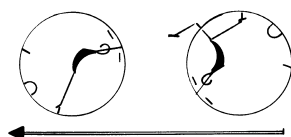
The bridge can only be counted once as a C and once as a D, regardless of the preceding element in the upper phase.

Illustration

If two D variations of the same centralised element are performed in a routine, the difficulty will be counted as follows:



decentralised B element + D difficulty (knee swing upgraded by previous B element)



decentralised B element + no additional difficulty counted

The second knee swing into bridge forwards will no longer be counted, as this is a repetition.

Decentralised moves

1. Repeating elements in the upper or lower phase [no change of difficulty = REPETITION]**Examples**

Given that one phase on its own can be decisive for the difficulty value of a decentralised move, the repetition of an upper or lower phase is counted as element repetition. The deciding factor for identifying repetition is whether the core part of the upper or lower phase is the same. Changing the starting or finishing position of a phase is not sufficient for a new variation. The same applies for leg positioning (tucked, piked, angled) as long as there is no change in difficulty. A free knee swing with both legs and with one leg is also counted as element **repetition**.

High roll:

high roll forwards – the first time in the middle of the length with sitting as an end position and the second time at the end of a length with a finishing position standing on the boards

high roll backwards against the rolling direction – the first time into straddle sitting and the second time into an elbow hang

Hip circle:

double back hip circle – once in the middle of a length finishing in a hip hang and the second time as a change of direction at the end of a length finishing in a standing position on the boards

Knee swing:

free knee swing into high sitting: the first time with a knee swing from one leg and the second time with a knee swing from both legs

2. Repeating decentralised elements once in the rolling direction of the wheel and once against the rolling direction, without any change in difficulty [no change in difficulty = REPETITION]**Examples****Hip circle:**

hip circle, downward hip circle with $\frac{1}{2}$ turn – once in the rolling direction of the wheel and the second time against the rolling direction

Knee circle:

two-legged knee circle – once in the rolling direction of the wheel and the second time against the rolling direction

5.4.2 NOT counted as move or element repetition

The following cases are not counted as repetition.

Centralised moves

a. Performing the same move forwards and backwards [= NO REPETITION]	
Example	
<p><u>Front support:</u></p> <p>1st move: front support forwards</p> <p>2nd move: front support backwards</p>	
b. Performing a move with and without bindings [= NO REPETITION]	
Examples	
<p><u>Bridge:</u></p> <p>1st move: giant bridge backwards in bindings, standing on the back board and holding the front rung handle</p> <p>2nd move: giant bridge backwards without bindings, standing on the back board and holding the front rung handle</p>	
c. Performing the same move with a different difficulty value [= NO REPETITION]	
Examples	
<p>All variations of moves where the variation results in a change of difficulty. However, each variation can only be recognised once with the different difficulty value.</p> <p><u>Element combinations in one binding with a double turn:</u></p>	

The same element combination once with A difficulty and once with B difficulty (= with one free turn, see straight-line B difficulty catalogue)

Giant bridges without bindings:

1st move: giant (rim) bridge forwards (B difficulty) **2nd move:** giant bridge forwards holding the rung handle (C difficulty)

1st move: giant bridge forwards holding the rung handle (C difficulty) **2nd move:** giant bridge as a D skill with a preceding special transition (see straight-line D difficulty catalogue)

d. Performing the same move with different stride positions (front, side, back or cross) [= NO REPETITION]

Example

Side rotation:

1st move: side rotation with one leg in a side stride position

2nd move: side rotation with one leg in crossed side stride position

e. Performing the same move with two arms and one arm [= NO REPETITION]

Example

Side rotation holding the front rim handle:

1st move: side rotation holding the front rim handle

2nd move: one-armed side rotation holding the front rim handle

Decentralised moves

a. Performing the same element in the upper phase, once in the rolling direction of the wheel and once against the rolling direction, whereby there is a change of difficulty value [= NO REPETITION]
Example

High roll:

Upper phase:

high roll forwards in the rolling direction (=B difficulty)

Upper phase:

high roll forwards against the rolling direction (=C difficulty)

In this case, it is important to differentiate between elements performed against the rolling direction of the wheel and elements that are performed as a change of direction. Those that are performed as a change of direction will be counted as being in the rolling direction and not against the rolling direction of the wheel.

b. Performing the same element as part of different element combinations in the upper phase [= NO REPETITION]
Examples

In an upper phase, the same element can be performed two or three times or combined with other different elements. It must be possible to identify the different elements in the combination and link them to the relevant structure groups. Combinations will not be considered different from one another if the only difference is a change in starting or finishing position.

Element combination with free knee swing backwards into high sitting backwards:

Upper phase:

high tuck over forwards, free knee swing backwards into high sitting backwards (= D difficulty)

Upper phase:

backward knee circle, free knee swing backwards into high sitting backwards (= D difficulty)

c. Performing a knee circle, once with one leg and once with both legs [= NO REPETITION]**Examples**

Knee circle:

Upper phase:

backward knee circle

Upper phase:

backward knee circle with one leg

d. Special case: Repeating an element in the upper phase that affects the difficulty value of a subsequent move or dismount

The straight-line difficulty catalogue describes cases where a preceding element can increase the difficulty of a move or dismount and the preceding element has a difficulty value of its own. If this preceding element is repeated, the difficulty of the repetition will not be counted, but it will still increase the value of the relevant move or dismount.

Example 1:

1: The gymnast performs a high roll backwards against rolling direction (C difficulty) in his/her routine.

2: The gymnast then repeats the same element in an upper phase at the end of the routine, leading directly into an overswing forwards as dismount.

The repeated difficulty (high roll backwards against rolling direction (C difficulty)) will not be counted the second time, but it will still increase the value of the dismount, which in this case will be calculated as a B (see straight-line B difficulty catalogue).

Example 2:

1: The gymnast performs an angled sitting with push off from the floor and 1/1 turn into an element of his/her choice (C difficulty).

2: The gymnast then repeats the same difficulty skill later in the routine and follows it with a knee swing backwards into high sitting.

The repeated difficulty skill (angled sitting with push off from the floor and 1/1 turn (C difficulty)) will not be counted the second time, but it will still upgrade the difficulty of the knee swing backwards into high sitting, which in this case will be counted as D difficulty (see straight-line D difficulty catalogue).

5.4.3 Evaluation by the judges

There is no specific deduction for move repetition as such, but the consequence of repetition can affect the final difficulty score as well as the overall length of a routine.

5.4.3.1 Evaluation by the head judge

- The head judge makes the relevant neutral deductions for violations of the length of a routine according to the information provided by the difficulty judges.

5.4.3.2 Evaluation by the difficulty judges

- If the gymnast repeats a move in a routine, its difficulty will only be recognised once (on the first occurrence) by the difficulty judges.
- If the maximum length of a routine (6 lengths) is exceeded as a result of repetition, the extra lengths will be counted as “too many”.
→ The difficulty judges inform the head judge how many lengths were performed over and above the permitted six.
- Move repetitions do not count towards the minimum number of moves, i.e. they are considered to be “missing moves”.
→ The difficulty judges inform the head judge about the number of missing moves.

5.4.3.3 Evaluation by the execution judges

- The execution judges evaluate the execution of all moves performed, including moves that are repeated.

6 CATALOGUE OF DEDUCTIONS FOR STRAIGHT-LINE

6.1. Specific deductions made by the execution judges in straight-line

	-0.1	-0.3	-0.5	-1.0
The gymnast bends down to re-secure the bindings (with his/her hands) after the routine has started (does not apply for straight-line routines performed to music)			X	
Rolling too far at the end of a length (wheel rolls beyond the rim handles)		X		
Stationary wheel (interruption of movement)	X (brief interruption)		X (significant interruption)	
Rolling back in centralised moves			X	
The gymnast performs a single or multiple extra swing(s) (exception STL-M) (→ Appendix STL A6)			X (per unit)	
Deviations from the ideal vertical position in upper arm stand or handstand positions (if recognized by the D-judges)		X ($>15^\circ$)	X ($>30^\circ$)	
More than 4 helpers to push in a landing mat			X	
The landing mat is already inside the competition area			X	
The landing mat is carried or pulled behind the rolling wheel or the mat is moved around inside the safety zone			X	
The wheel touches the landing mat before the gymnast has landed after the dismount			X	
The wheel touches the landing mat during the routine before the gymnast performs the dismount				X
Uncontrolled body movements after landing a dismount or vault ("shaking" of the body)	X (minor correction)	X (major correction)		
Uncontrolled arm movements after landing a dismount or vault	X (minor correction)	X (major correction)		
Steps after landing a dismount or vault (see description below)	X	X	X	
Fall after a dismount				X

gymnast brushes his/her hands on the floor on landing		X		
hips below knee level on landing				X

Steps on landing

1 step	-0.1
2 steps or 1 jump	-0.3
>2 steps	-0.5

7. REGULATIONS FOR STRAIGHT-LINE ROUTINES PERFORMED TO MUSIC

7.1. General information

Straight-line routines to music will be performed according to the following criteria:

- The music for a routine must be a minimum of 2:30 minutes and a maximum of 3:15 minutes long.
- A beep sound is allowed before the beginning of the music to help the gymnast prepare for the start. The beep sound is not counted for the length of the music.
- A straight-line music routine performed without music (for whatever reason) will receive a score of 0.00 points.

7.1.1. Choice of music

When selecting a piece of music, it is the responsibility of every gymnast to make sure that the choice of music is appropriate for a competition and preserves the seriousness of wheel gymnastics. If this is not the case, the competition management has the right to exclude the gymnast from the competition.

Gymnasts should consider the following factors when making their music selection:

- The gymnast must choose instrumental music, whereby the use of voice is permitted (without words and text).
- It is permitted to use music with special sound effects and noises, as long as the seriousness of the competition is preserved.
- Applause (cheering) as part of the music is not permitted.
- The use of national anthems or the use of music as a political statement is not allowed.

A breach of the regulations for the choice of music may **lead to an exclusion of the gymnast by the head judge**. In this case, the head judge must inform the competition management immediately and justify his/her decision.

In order to avoid a possible exclusion from the competition, it is possible to submit a piece of music to the IRV in advance in order to have it checked and approved. This is not necessary in the case of purely instrumental music. If a gymnast uses a piece of music with voices or other special sound effects and does not get it approved by the IRV, there will always be a risk that the music is not accepted by the judging panel and the gymnast might receive a lower music score or even be excluded from the competition. The approved music will be stored by the IRV for a year to have it available in case of discussion. The music will be deleted after one year.

7.1.2. Beginning and end of the judging process

In addition to the general regulations, the following rules apply for straight-line routines performed to music:

After the signal from the head judge, the gymnast has a time limit of 10 seconds to begin moving into the starting position. The judging process starts for all judges when the gymnast has taken up his/her chosen starting position and the music begins.

- The gymnast may start his/her routine outside of the wheel without touching the wheel.
- The gymnast may also start the routine in any position in or on the wheel. In this case the coach is allowed to help the gymnast reach his/her starting position before the music starts. Any help from the coach after the music started will be counted as a fall.
- The gymnast may perform a beginning with a run up. In this case the gymnast is allowed to lose contact of the wheel in order to set the wheel in motion. The difficulty judge does not evaluate any elements associated with setting the wheel in motion. The gymnast may not show any difficulty elements before setting the wheel in motion for the run-up. In this case the loss of contact to the wheel will be counted as a fall by the execution judges.
- The judging process ends with the finishing pose of the gymnast.
- After a total of three falls of the gymnast, assists from the coach and/or leaving the safety zone, the judging panel will follow the regulations described in STL 7.2.4. The gymnast will be allowed to finish his/her routine.

7.2. Regulations governing the tasks of the head judge

7.2.1. Measuring the time and evaluating the choice of music

In addition to his/her usual tasks, the head judge is responsible for checking the time of the music in straight-line routines to music. Timing starts from the first tone of the music and ends with the last tone of the music.

The head judge does also exclude gymnasts from the competition in the case of an inappropriate choice of music in accordance with the competition management (see STL 7.1.1).

The decision about whether to exclude a gymnast from the competition must be made after seeing the gymnast's whole routine. It is not permitted for the head judge to interrupt a routine in case he/she decides the music is inappropriate.

In case that the whole routine is performed without music, the head judge will set the final score of the routine as 0.00 points.

7.2.2. Length of routines

The duration of a straight-line routine performed to music is defined by the duration of the music (see STL 7.1). There is no limitation regarding the number of lengths or swings performed. Therefore no deductions for the number of lengths or swings will be applied.

As in straight-line routines without music, a minimum of 8 moves and a dismount must be shown by the gymnast.

→ If less than 8 moves are performed or the dismount is missing, the head judge will apply the appropriate neutral deductions (see table below).

→ If the dismount is performed after the end of the music, the head judge will make a neutral deduction for the missing dismount (see table below).

	-0.1	-0.3	-0.5	-1.0
missing move				per move
missing dismount			X	
music too short or too long			X	

7.2.3 Interrupting a routine with music

Interruptions of routines by the head judge in straight-line with music follow the same rules as described in the general regulations, but an exception can be made in straight-line routines performed to music. As long as the gymnast or other people are not endangered, the head judge does not have to interrupt the routine, but the relevant deductions for leaving the safety zone will apply.

If the head judge interrupts the routine, the point in the music where the interruption occurred will be noted down by the head judge. The gymnast is then allowed to resume his/her routine from 10 seconds before the point of interruption.

7.2.4 Terminating a routine with music

In straight-line routines performed to music, the head judge will indicate the termination of a routine by standing up and informing all other judges. The head judge will note down the time of the music when the termination occurred. The gymnast is allowed to complete the routine and the judges will continue judging until the routine is finished, noting down the point of termination by the head judge.

7.3. Regulations governing the tasks of the difficulty judges

The calculation of the difficulty score in straight-line routines performed to music follows the same principles as described in the general regulations and the regulations for straight-line routines (see GR 5.2 and STL 5.3).

However, there are some specific regulations for straight-line routines to music

7.3.1. Variations of difficulty elements

The gymnasts are allowed to show variations of movements when performing difficulty elements in straight-line to music in order to interpret the music. Nevertheless, the basic difficulty requirements of an element or move need to be fulfilled.

Variations of difficulty elements must be easily identifiable according to the IRV difficulty catalogue in order to be recognized.

Difficulty elements that are performed in the upper phase must have a complete lower phase in order to be recognised.

A difficulty element that ends in a pose or creative element with floor contact will not be recognized.

Decentralised difficulty elements performed directly from a starting position in the upper phase will not be counted.

7.3.2. Counting of difficulty elements performed without music

Difficulty elements performed after the music has finished will not be evaluated by the difficulty judges. Execution deductions will still apply.

7.4. Regulations governing the tasks of the execution judges

The calculation of the execution score in straight-line routines performed to music follows the same principles as described in the general regulations and the regulations for straight-line routines (see GR 5.3 and STL 6).

7.4.1. Variations in the execution of difficulty elements

The gymnast is allowed to show variations of the ideal execution described in the difficulty catalogue or the technical language when performing difficulty elements in straight-line with music in order to interpret the music. However, the gymnast must perform variations

from the ideal execution with a clear intention. The judges must easily be able to differentiate between an intentional movement and a fault in execution.

Examples

	Fault in execution	Tolerated variation
Hip movements	Hip angle too open or non-alignment of hips (e.g. in a pike or pike support position), when the recognition of an element is at stake.	Non-standard hip movements that deviate from the prescribed execution of an element are permitted as long as they clearly serve to interpret the music (e.g. dance moves).
Head positioning	Head not an extension of the backbone (e.g. in bridges and spindle position)	Accentuated or isolated head movements that are clearly intended as musical interpretation.
Foot positioning	Feet not together (e.g. wobbling, heels apart, one foot slipping when standing with feet together without bindings)	Accentuated or isolated foot movements that obviously serve to interpret the music.

7.4.2. Creative elements and poses

Creative elements and poses are used to interpret the music. The gymnast is allowed to perform an indefinite number of creative elements or poses inside or outside the wheel.

For creative elements and poses, no execution deductions will be applied. The only exception is if a fall occurs during a creative element or pose. This will be deducted as usual (-1.00 point).

The following rules apply for creative elements and poses with floor contact:

- The gymnast must maintain contact with the wheel.
(otherwise counted as a fall: -1.00 point deduction)
- The feet or other parts of the body may touch the floor. There is no limitation regarding the number of floor contacts.
- It is permitted to start the routine outside or inside the wheel, not necessarily touching the wheel. As soon as the gymnast touches the wheel, he/she has to stay in contact with the wheel until he/she performs the dismount (exception: beginnings with run up or aerial elements without contact to the wheel or floor (see STL 7.1.2)).

7.4.3 Evaluating elements performed after the end of the music

Execution deductions will continue to be made after the end of the music.

7.5. Regulations governing the tasks of the artistic impression judges

Rights and obligations of the artistic impression judges

General tasks

- The artistic impression judges are responsible for calculating the scores for artistic impression in straight-line routines performed to music.
- It is the duty of the artistic impression judges to evaluate all routines correctly, efficiently and independently.
- The artistic impression judges must follow the instructions of the head judge and difficulty judges.
- They must be ready when the head judge signals the beginning of the routine.

Determining and documenting the score for artistic impression

- The artistic impression judges document their awarded points accurately in order to be able to explain their scoring in case of a subsequent judges' meeting.

7.6. Evaluation of artistic impression in routines performed with music

General information

- The artistic impression judges can award a maximum of 10.00 points for artistic impression.
- The calculation of the final score for artistic impression follows the rules described in the general regulations.
- The artistic impression judges individually evaluate each routine based on 7 categories. They deduct points for reduced technical quality of the music in category 1 and award points for categories 2-7.
- The categories for evaluating artistic impression in straight-line routines performed with music can be found in the table below. They will be further described in chapter STL 7.6.1.

	Category	Maximum points
1	Technical quality of the music	1.00
2	General concept of the routine – Artistic message	2.00
3	Creativity of the routine - Highlights	2.00
4	Harmonious coordination between music and elements/movements	2.00
5	Transitions and flow of movements	1.00
6	Variation / Use of space	1.00
7	Physical expression – stage presence	1.00
		10.00

- For category 1, the artistic impression judges can deduct a maximum of 1.00 point if the following technical requirements are not met:

audible cuts in the music (regardless of how many)	-0.50
bad recording quality (e.g. crackling sounds)	-0.50
inconsistent volume of the music	-0.50
choice of music not in accordance with guidelines	-1.00

- For categories 2-7, the artistic impression judges can award points for each category in **0.20 intervals**.

(Example: An artistic impression judge can award 0.00 points in the category “Creativity of the routine – Highlights” if the gymnast does not show any creativity in his/her movements at all. The artistic impression judge may also award the full 2.00 points if the routine was outstandingly creative and packed with highlights.)

7.6.1. Description of evaluation categories 2-7

The following descriptions contain questions to guide the music judges through the evaluation of straight-line routines performed with music. This does not mean that all of these points need to be fulfilled by the gymnast to achieve the maximum points, but they should provide guidance for the judges' evaluation.

2 - General concept of the routine / artistic message – 2.0 pts.

The gymnast must show an intention/purpose behind his/her interpretation of the music. The selection of movements, gestures, difficulty elements, creative elements, etc. must be embedded in an overall concept that leads through the routine from start to finish.

Guiding questions for music judges regarding the evaluation of the general concept/artistic message of a routine:

- Is there an overall concept behind the routine?
- Is it possible to identify an overall topic/theme of the routine?
- Is the gymnast's intention clear?
- Is it possible to identify a clear attempt to interpret the concept of the routine through movements and elements?
- Is the gymnast consistent in his/her interpretation of the music?
- Is there a relation between the music and the intention of the gymnast?
- Does the gymnast try to interpret certain feelings/emotions/topics?

3 - Creativity / Highlights – 2.0 pts.

Creativity is expressed through the use of a wide range of different "highlights" such as poses, transitions, connecting moves and changes of direction, including strength elements, dance moves and twists/pirouettes. These highlights are not usually difficulty elements in their own right, although they may represent a creative element that is part of a defined move. Non-defined variations in execution can also be classed as highlights.

These creative highlights must always be “at one” with the music. In other words, they must clearly reflect and interpret the music.

By using new elements, the gymnast should aim to be original in his/her routine. This can also be achieved by using new combinations of familiar elements.

Guiding questions for music judges regarding the evaluation of creativity:

- Does the gymnast show a creative beginning and/or end of the routine?
- Does the gymnast show creative variations of difficulty elements?
- Does the routine contain creative transitions, elements and poses?
- Does the routine include creative, interesting and/or original elements or element combinations?

4 - Harmonious co-ordination between music and technical elements/movements. – 2.0 pts.

The music judges evaluate the harmonious co-ordination of music, gymnast and wheel, as well as the expression of the gymnast. An evaluation will be made whether the gymnast interprets the accents and/or musical climaxes, whether the dynamics of the wheel and fast and slow moves reflect the tempo/pace of the music and whether the gymnast moves in time to the music.

Guiding questions for music judges regarding the evaluation of the harmonious co-ordination of a routine:

- Do the movements and elements fit to the dynamic of the music?
- Do the movements and elements reflect the speed and rhythm of the music?
- Does the gymnast react to changes in the character, speed and rhythm of the music by his/her movements/gestures/facial expression?
- Are the beginning and the end of the routine well-coordinated with the music? (e.g. the music ends before the gymnast performs his/her finishing pose)
- Does the gymnast react to changes in the ambiance, style and/or character of the music?

5 - Transitions / Flow of movement – 1.0 pt.

The gymnast must fluently connect all parts of the routine to create a consistent impression. All movements and difficulty elements must be performed with ease and lightness.

Guiding questions for music judges regarding the evaluation of the routine's flow and transitions:

- Does the gymnast stay in control of the wheel and his/her movements?
- Is the routine presented with ease and lightness?
- Does the routine make a fluent and consistent impression?
- Does the gymnast perform moves, creative elements and poses with a good flow of movement that fits to the style of the music?

6 - Variation / Use of space – 1.0 pt.

Variation is achieved by performing creative highlights at different levels, both in or on the wheel (upper and lower phases), as well as inside and outside the wheel. This means that the gymnast should aim to present a wide spectrum of different movements in order to achieve maximum variation in the routine as a whole.

Guiding questions for music judges regarding the evaluation of variation of a routine:

- Does the gymnast use different levels of the wheel (inside/outside/on the wheel)?
- Does the gymnast show a well-balanced mix of moves, creative elements and poses?
- Does the gymnast show a broad variation in the transitions between moves and elements?

7 - Physical expression – 1.0 pt.

The gymnast must use his/her whole body through dance moves, gestures and facial expression to interpret the style and the emotions of the music. All movements must reflect and fit to the music and the concept of the routine.

Guiding questions for music judges regarding the evaluation of the physical expression in a routine:

- Does the gymnast use his/her whole body to interpret the music?
- Does the gymnast complete all movements with amplitude?
- Do the gymnast's body movements reflect the style of the music? Does the physical expression fit to the style of the music?
- Does the gymnast maintain a good stage presence and expression throughout the routine?
- Is the expression of the gymnast catching or touching? Is it consistent with the ambiance of the music?
- Does the gymnast refer to the music and the concept of the routine by his or her gestures, facial expressions and movements?

III.

Specific Regulations for Spiral (SPI)

What's new?	
The gymnast no longer has to show a dismount at the end of a spiral routine	see 3.4
New structure groups are introduced for the evaluation of difficulty for elements with a B difficulty or higher	see 4.4.6
New regulations for resuming a routine with a small spiral after an interruption.	see 4.4.5.2
New regulations governing the recognition of difficulty for changes and transitions.	see 4.4.5.4
There is no longer a maximum time for small spirals.	see 4.4.5

1. THE SPIRAL DISCIPLINE

The wheel is set in motion on one rim and for most skills the wheel rim in contact with the floor traces an approximately circular path.

Skills in spiral are divided into three categories:

- big spiral
- small spiral
- vertical spiral

In the **big spiral** the diameter of the wheel's circular path on the floor is bigger than the diameter of the wheel, and the angle of inclination of the system is more than 60°.

In the **small spiral** the diameter of the wheel's circular path on the floor is smaller than the diameter of the wheel, and the angle of inclination is less than 30°.

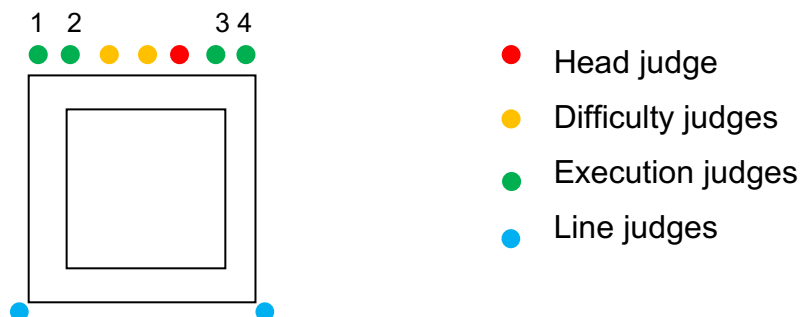
The recognition as a big or small spiral is thus defined by the circular path of the wheel.

In the **vertical spiral**, the wheel rotates on one rim in an almost upright position. The circular path traced by the wheel rim on the floor is extremely small, while the rotational movement takes place solely around the longitudinal axis through the entire system consisting of gymnast and wheel (i.e. there is no inverted position). The wheel moves at high speed, whereby the gymnast can perform various standing, holding or hanging positions without the second wheel rim touching the floor.

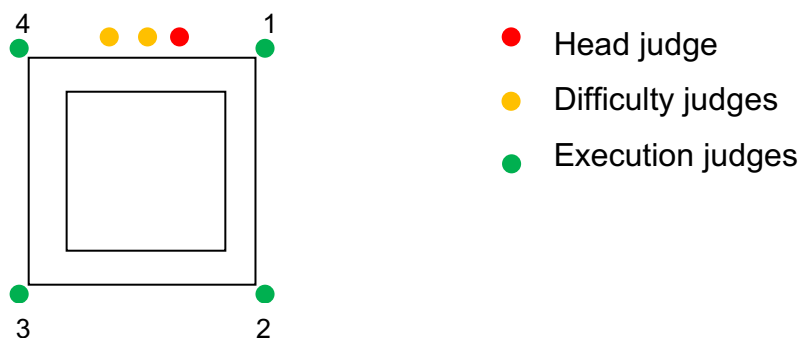
Spiral routines are performed within a squared competition area. Further information regarding the competition area in spiral can be found in the Competition Rules.

2. POSITIONING OF THE JUDGING PANEL IN SPIRAL

The judging panel as described in Chapter 1 (General Regulations) is usually positioned in a row. In this case, two line judges will be used to control whether the gymnast rolls out of the competition area or safety zone (by way of a hand signal, flag, or similar).



It is also possible to place the execution judges at the corners of the competition area, outside the safety zone (see below). In this case, no additional line judges are necessary.



3. BEGINNING, INTERRUPTION AND TERMINATION OF ROUTINES IN SPIRAL

3.1. Beginning of a routine

The gymnast waits in bindings for the head judge to give a sign to start the routine. After the signal from the head judge, the gymnast has a time limit of 10 seconds to start the routine. If the gymnast chooses to start without bindings, he/she should be ready to start as soon as the head judge gives the signal.

The judges start their evaluation with the gymnast voluntarily setting the wheel in motion after receiving the signal from the head judge.

3.2. Interruption of a routine

The following cases lead to an interruption of a routine in spiral:

- Rolling out of the safety zone – If the gymnast rolls out of the safety zone, the head judge must stop the routine and ask the gymnast to reposition the wheel in the competition area.
- Assistance from the coach that leads to an interruption of the wheel rotation
- Technical problems (e.g. obstacles, broken bindings)
- A fall by the gymnast, or the wheel falling flat on the floor (see SPI 3.2.1)
- The wheel comes up into standing position on both rims during the routine (see SPI 3.2.2)

3.2.1. Definition of a fall in spiral

- A fall is counted if the gymnast steps on the floor with one or both feet so that the circular movement of the wheel is interrupted. It is irrelevant whether or not the gymnast is still holding the wheel with his/her hands.
- It is also counted as a fall if the circular movement of the wheel is not interrupted, but the gymnast has his/her body weight on the floor.
- The gymnast touches the floor with one or both feet in the transition from small spiral to standing (e.g. in order to avoid the wheel tipping over).
- The wheel ends up flat on the floor during a routine, without the gymnast being able to restart a spiral movement from the same position. The gymnast needs to pick up and re-tip the wheel in order to continue.

3.2.2. Interruption of a routine when the wheel comes up into standing position on both rims during the routine

- The wheel comes up into standing position on both rims during the routine; the gymnast needs to re-tip the wheel.
- The wheel is also considered to have come up into standing position on both rims if the gymnast rolls more than a $\frac{1}{4}$ wheel rotation on both rims before managing to get the wheel back into a spiral movement through a shift of body weight. The same applies if the gymnast tips the wheel backwards and forwards more than twice during one unit before getting the wheel back into a spiral movement.
- The wheel is also considered to have come up into standing position on both rims if the gymnast performs more than one rotation on both rims in the vertical spiral.

3.3. Continuing a routine (after interruption)

Before continuing a routine after an interruption, the gymnast or coach may ask the difficulty judges whether the difficulty performed immediately before the interruption was recognised.

The following options are possible for continuing a routine in big spiral:

- The gymnast can tip the wheel independently and continue directly with the next move.
- The gymnast can tip the wheel independently and perform one additional wheel rotation before continuing with the next move in the routine. In this case, the gymnast or coach must inform the judging panel that an extra rotation will be performed. (NB: The judges will not judge this extra wheel rotation.)
- The coach is allowed to provide active assistance (including holding the wheel) during the additional wheel rotation and before the gymnast continues independently with the next move in the routine. (NB: The judges will not judge this extra wheel rotation.)

The following options are possible for continuing a routine in small spiral:

- The coach is allowed to provide active assistance during one wheel rotation, before the gymnast continues independently with the next move in the routine. In this case, the coach is permitted to move the wheel from side to side before setting it in motion in the desired spiral path.
- If the coach assists the gymnast by leading the wheel into a small spiral, the first small spiral will not be counted by the difficulty judges. The difficulty judges will start counting the difficulty value of the first independently performed move in small spiral see SPI 4.4.5.2. The execution judges will also start making their deductions with the first independently performed move (exception: fall).

- In the case of a low pike straddle stand, the gymnast may re-start the small spiral independently, but must get into position in the wheel within one wheel rotation (i.e. must set the wheel in motion and step onto the wheel all within the same wheel rotation).
- The gymnast is allowed to repeat the transition from big to small spiral. This is only possible if the gymnast performs an extra rotation in the big spiral first.

The following options are possible for continuing a routine in vertical spiral:

- The gymnast is permitted to use his/her foot to push off the floor in order to achieve a vertical spiral without the help of a coach. A maximum of 5 pushes is allowed.
- The gymnast can perform an extra side front support with leg circles in order to get back into a vertical spiral. The gymnast can either achieve this on his/her own by performing a transition from big to small spiral, or a coach can assist the gymnast directly into a small spiral.

3.4. End of a routine

The judging process ends...

- ...with the gymnast in standing position with legs together after stepping out of the wheel (finishing pose).
- ...if the gymnast does not continue a routine within 30 seconds after an interruption.
- ...if the head judge stops and terminates the routine (see GR 5.1.1.1).
- ...after the third call by the head judge for the gymnast to return to the competition area after the wheel as rolled out of the safety zone.

Description of the finishing pose:

After the gymnast has performed the last move and the wheel is in a still and upright position with both rims on the floor, the gymnast must step out of the wheel with a maximum of two steps. The final position of the gymnast is next to the wheel with both feet close together and the arms in side position.

4. THE EVALUATION OF ROUTINES IN SPIRAL

4.1. Length of spiral routines

A voluntary spiral routine comprises minimum 8 and maximum 12 moves. The required minimum must be achieved without repetition. If this is not the case, i.e. if the gymnast has to repeat moves in order to achieve the minimum 8 moves, the repeated moves will be counted as missing moves and the necessary deductions will be made by the head judge. However, the execution deductions for the repeated moves will still be applied.

NB:

No dismount is required in spiral routines. For the definition of how to leave the wheel after the final move and transition to standing, see GR 5.1.1.

The difficulty judges inform the head judge about the length of the routine. The head judge will apply the appropriate deductions:

	-0.1	-0.3	-0.5	-1.0
gymnast performs less than 8 moves				X (per move)
gymnast performs more than 12 moves		X (per move)		
gymnast needs more than 10 seconds to start the routine after signal from the head judge				X

The execution judges will evaluate all moves, even if the gymnast exceeds the maximum of 12 moves.

4.2. Definition of judging units in spiral

For the purpose of evaluating execution, a routine is divided into judging units.

A judging unit in spiral consists of the preceding transition together with the subsequent move (see Appendix SPI A2 for further definitions).

Furthermore, the following transitions are judging units in their own right. They are known as transitional units:

- Transition **from big to small spiral**
- Transition **from small to big spiral**

- Transition **from small to vertical spiral** (side front support with leg circles or side front support on the upper rim with leg circles)
- Transition **from small spiral to standing and stepping out of the wheel** (finishing pose)

The exact definition for each transitional unit can be found in the Appendix SPI A3.

4.3. General composition requirements for spiral routines

- A spiral routine must start from a basic standing position in the wheel.
- Routines must be constructed such that moves are not repeated.
- Routines must be constructed such that they contain moves from different structure groups. The repeated performance of similar moves or elements from the same structure group is not desired.
- The routine ends with stepping out of the wheel and the finishing pose. No dismount is required in spiral routines.

4.4. Specific regulations governing the tasks of the difficulty judge in spiral

4.4.1. Recognition of a big spiral

The circular path of the wheel is decisive for the recognition of a big spiral.

In the **big spiral** the diameter of the wheel's circular path on the floor is bigger than the diameter of the wheel.

As long as the circular path of the wheel is that of a big spiral, a move will be recognised even if the angle of inclination is obviously too low.

4.4.2. Recognition of a small spiral

The circular path of the wheel is decisive for the recognition of a small spiral.

In the **small spiral** the diameter of the wheel's circular path on the floor is smaller than the diameter of the wheel.

As long as the circular path of the wheel is that of a small spiral, a move will be recognised even if the angle of inclination is obviously too high.

4.4.3. Recognition of a vertical spiral

In the **vertical spiral**, the wheel rotates on one rim in an almost upright position. The path traced by the wheel rim on the floor is extremely small, while the rotational movement takes place solely around the longitudinal axis.

As long as the path of the wheel is that of a vertical spiral, a move will be recognized as a vertical spiral.

4.4.4. Non-recognition of a spiral

If the circular path of the wheel is not clearly identifiable as that of a small, big or vertical spiral, no difficulty value will be counted for this move. In this case, the move will not be considered for the length of the routine. The execution judges will deduct a fixed deduction of 1.0 point after being informed by the difficulty judge(s) see SPI 5.1. No other deductions will be made by the execution judges for this unit.

4.4.5. Counting difficulty in spiral

The counting of difficulty in spiral follows the general regulations for the counting of difficulty as described in the general part of the Code of Points see GR 5.2.

In spiral, a difficulty value is always attached to a move. Transitions on their own (e.g. changes, rolls through the arms) are not difficulty elements in their own right, but they can determine the difficulty value of a move. The following method of counting is applied by the difficulty judges:

Difficulty in the big spiral is attached to a move consisting of 2 wheel rotations.

Difficulty in the small spiral is attached to a move lasting at least 3 seconds.

Difficulty in the vertical spiral is attached to a move lasting 3-5 vertical rotations.

4.4.5.1. Counting moves (units of difficulty) in big spiral

The judges always count 2 wheel rotations per move (unit of difficulty) in big spiral, from the beginning of the routine or from a tip over from one rolling rim to the other.

If the gymnast performs an uneven number of wheel rotations, the difficulty judges determine the difficulty value of the routine starting from the first 2 wheel rotations.

A unit of difficulty in the big spiral will only be recognised by the difficulty judges if the gymnast has completed **more than** $\frac{3}{4}$ of the move and has performed the technical characteristics of the move. If a unit of difficulty fails (e.g. because of a fall, help from the coach, rolling out of the safety zone or coming up into standing on two rims) before the gymnast has completed **more than** $\frac{3}{4}$ of the move, or if the technical characteristics of the move were not sufficiently identifiable, its difficulty will either not be recognised at all, or it will be allocated a lower level of difficulty.

The spiral difficulty catalogue contains extra comments regarding difficulty recognition in the column marked "Difficulty judges/Recognition".

Comment:

In the case of a minor deduction for being "briefly on both wheel rims" in a move, the difficulty judges will recognise the difficulty of the move, while the execution judges will make the relevant deductions for the execution of the move. In contrast, if the gymnast incurs a major deduction by rolling more than $\frac{1}{4}$ wheel rotation on both wheel rims or if the gymnast tips from rim to rim more than twice during a move, the difficulty of the move will not be counted.

An exception to this rule is represented by changes (of direction) that increase the difficulty value of a move. In such cases, the following applies: If both wheel rims touch the floor during a change (even very briefly), no increase in difficulty will be recognised. The move will retain its original difficulty value.

4.4.5.2. Counting moves (units of difficulty) in small spiral

Counting moves or units of difficulty in small spiral starts after the transition from big to small spiral.

A unit of difficulty in small spiral will only be recognised by the difficulty judges if it is performed for at least 3 seconds in the circular path of a small spiral (i.e. the diameter of the circular path on the floor is smaller than the diameter of the wheel). A move in small spiral ends as soon as the gymnast changes his/her position in the small spiral, or with the transition to a big or vertical spiral or standing.

If the coach assists the gymnast by leading the wheel into a small spiral after an interruption, the first small spiral will not be counted for the difficulty value and the length of the routine. The difficulty judges will start counting the difficulty value of the first independently performed move in small spiral. The execution judges will not make any

deductions for the first small spiral (exception: fall). They will resume judging when the gymnast has reached the position of the next small spiral.

NB:

The first small spiral, which will not be counted for the difficulty, must be held for at least 3 seconds.

Example: The coach assists the gymnast by leading the wheel into the small spiral, while the gymnast has already reached a split position on the upper rim. In this case, the split on the upper rim will not be counted by the difficulty judges. It will also not count for the total number of moves. However, the gymnast has to show the split on the upper rim for at least 3 seconds before changing into the next position (e.g. split on the upper rim with one arm). If not, the second position (e.g. split on the upper rim with one arm) will not be counted as an independently performed small spiral. This means that the difficulty judges will not count the difficulty, but the execution judges will start to evaluate as soon as the gymnast changes position.

4.4.5.3. Counting moves (units of difficulty) in vertical spiral

Counting moves or units of difficulty in vertical spiral starts after the side front support with leg circles.

A unit of difficulty in the vertical spiral will only be recognised by the difficulty judges if the gymnast performs at least 3 vertical rotations in the prescribed path of a vertical spiral (i.e. the diameter of the circular path on the floor is more-or-less one point).

4.4.5.4. Counting changes of direction

Changes of direction will always be counted as units of difficulty together with the two following wheel rotations or the following small spiral. The difficulty value of a change of direction can only be counted once, even if the two following wheel rotations or small spiral differ. If the same change of direction is repeated during a routine, the difficulty value of the move performed after the second change of direction will be counted instead. On the other hand, performing the same two wheel rotations following different changes of direction will now be counted as separate elements.

Example: The gymnast performs a tip change in big spiral followed by two rotations of side stand with closed legs. This will be counted as a B value. Later in the routine, the gymnast performs a tip change followed by two wheel rotations in side stand with side straddle. In this case, the second tip change will not be counted for the difficulty value, as it will be a repetition. The side stand with side straddle (=A) will be counted instead.

Below is an overview of the different types of changes of direction:

Change (using hands)	in bindings	without bindings
Free change	in bindings	without bindings
Tip change	in bindings	
Combination of free change and tip change	in bindings	
Change performed behind in combination with moves performed behind (no tip change)	in bindings	without bindings
Step tip change		without bindings
Free step tip change		without bindings
Step tip changes out of a straight position (example: splits tip change)		without bindings
(Free) change and $\frac{1}{2}$ turn without change of rolling rim before/after side bridge		without bindings











In particular, changes of direction are considered to be identical and lead to **repetition** if they only differ by

- the combination of following elements,
- being performed before or after the first rotation,
- performed as single, double, or triple change.

For **example**, a free change in bindings and a free change without bindings will be counted separately, given that changes with and without bindings are always different. However, a free change into free fly and a free change into side rotation performed behind are considered identical changes and will only be counted once.

4.4.6. Required structure groups in spiral

Structure groups are only assigned to elements with B difficulty or higher. A elements do not have a structure group.

I	moves and element combinations with at least one rotation free-fly	
II	moves and element combinations in bindings performed behind	
III	moves and element combinations with 2 rotations in a bridge	
IV	moves and element combinations with at least 1 rotation in straight position without bindings	
V	moves and element combination in big spiral with minimum ½ turn (not as a transition before the move)	
VI	moves and element combinations with change of direction without bindings	
VII	decentralised moves and element combinations with a decentralised element in big spiral	
VIII	moves in small spiral on the upper rim	
IX	moves in small spiral on the lower rim	
X	moves in centralised small spiral with one arm	

4.5. Move repetitions in spiral

Routines should be constructed such that no moves are repeated. A move can be counted as a repetition even if there are small differences in execution or body positioning. It is therefore necessary to define exactly what is and what is not counted as repetition.

4.5.1. Definition of move and element repetitions and repetitions of changes

a. Performing the same change (with or without bindings) within the same routine (=REPETITION)		
	Example	
The gymnast performs the same change twice. In this case the difficulty of the following move or element combination will count, whereas the difficulty value of the change will only count the first time.	<p>Change 1: Free double change in bindings Move 1: Side free-fly</p> <p>Change 2: Free double change in bindings Move 2: Side stand in bindings performed behind</p> <p>In this case, the second change will not count, but the difficulty of the side stand in bindings performed behind will count.</p>	
b. Performing the same move with element combination twice, with a change of the order of the elements (=REPETITION)		
	Examples	
Performing the same element combination twice with only the order of the elements changing, will only be counted once (unless stated otherwise in the difficulty catalogue).	<p><u>Big spiral:</u> Move 1: ROT1: Side stand with bindings ROT2: Side free-fly Move 2: ROT1: Side free-fly ROT2: Side stand with bindings</p>	<p><u>Big spiral:</u> Move 1: ROT1: Side stand without bindings ROT2: Side straddle stand without bindings Move 2: ROT1: Side straddle stand without bindings ROT2: Side stand without bindings</p>

c. Performing the same move with different standing and/or holding zones (=REPETITION)

Examples

<p><u>Big spiral:</u> Side rotation without bindings:</p> <p>Move 1: Side rotation without bindings (= standing on the front rim halfway between the boards, holding the rung handles)</p> <p>Move 2: Side rotation without bindings, standing on the front rim halfway between the boards, holding the upper rim next to the rung handles</p>	<p><u>Small spiral:</u> Side front support without bindings:</p> <p>Move 1: Side front support without bindings, standing on the upper rim halfway between the boards, holding the upper rim next to the rung handles</p> <p>Move 2: Side front support on the upper rim with legs in straddle position next to the rung handles, holding the upper rim next to the boards</p> <hr/> <p>Variations of a low side straddle stand with different standing and holding positions on the wheel</p> <p>Variations of a low side splits with different holding zones (e.g. holding the rung handles, holding the upper rim, holding the upper rim handle)</p>	<p><u>Vertical spiral:</u></p> <p>Move 1: Vertical spiral with legs in straddle position</p> <p>Move 2: Vertical spiral with legs together</p>
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d. Performing the same move with element combination with different transitions, without a change in difficulty value (Exception: changes!) (=REPETITION)

Examples

<p><u>Big spiral:</u> Move with element combination in bindings:</p> <p>Move 1 with element combination: ROT1: one-armed front support backwards (change of grip) ROT2: spindle rotation forwards</p> <p>Move 2 with element combination: ROT1: one-armed front support backwards (free) ROT2: spindle rotation forwards</p>	<p><u>Big spiral:</u> Handstand:</p> <p>Move 1: Handstand jump in tuck position</p> <p>Move 2: Handstand jump in straddle position</p>
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e. Performing the same move with different types of grip (=REPETITION)	
Example	
<p>Big spiral: Front support forwards:</p> <p>Move 1: Front support (= with underarm grip) forwards</p> <p>Move 2: Front support with overarm grip forwards</p>	
f. Performing the same move in different rolling directions (=REPETITION)	
Example	! Exception !
<p>Big spiral:</p> <p>Move 1: single change, side rotation (clockwise direction)</p> <p>Move 2: single change, side rotation (anti-clockwise direction)</p>	<p>An exception to this rule is made if the change of rolling direction results in a change of difficulty value.</p> <p>Example of an exception:</p> <p>Move 1: Low side straddle stand (=A) (from small spiral to a stationary position on the floor)</p> <p>Move 2: Low side straddle stand (change of rolling direction from preceding move) (=C)</p>
g. Performing moves without bindings with variations in leg positioning without placing the free leg on the wheel (=REPETITION)	
Examples	
<p>Big spiral: Side bridge without bindings behind:</p> <p>Move 1: Side bridge without bindings behind</p> <p>Move 2: Side bridge without bindings behind, with one leg in bent stride position in front and the free foot held close to the opposite knee</p>	<p>Big spiral: Side rotation without bindings:</p> <p>Move 1: Side rotation without bindings</p> <p>Move 2: Side rotation without bindings, with one leg in bent stride position in front and the foot against the opposite knee</p>

h. In small spiral: Performing the same move holding once in the rolling direction of the wheel and once against the rolling direction of the wheel (=REPETITION)**Example**

One-armed low side straddle stand:

Move 1:

One-armed low side straddle stand (holding with arm in rolling direction)

Move 2:

One-armed low side straddle stand (holding with arm against rolling direction)

4.5.2. Cases NOT counted as repetition

a. Performing the same move with different difficulty values (=NO REPETITION)	
	Example
As soon as the difficulty value of a move changes because of a particular transition, it will not be counted as repetition.	Side rotation without bindings: Move 1: side rotation without bindings (=A) Move 2: (step tip change) side rotation without bindings (=B) Move 3: (free change) side rotation without bindings (=D)
b. Performing the same move forwards and backwards (=NO REPETITION)	
	Example
Front Support: Move 1: front support forwards Move 2: front support backwards	
c. Performing the same move with one leg in stride position (in front, to the side, behind or across the other leg) (=NO REPETITION)	
	Examples
Side rotation without bindings: Move 1: side rotation without bindings Move 2: side rotation (without bindings) with one leg in side stride position on the stride rung	Side front support: Move 1: side front support Move 2: side front support with one leg in side stride position on the stride rung

d. Performing the same move with one arm (=NO REPETITION)**Examples**

Front support:

Move 1:

front support forwards

Move 2:

one-armed front support forwards

Side front support with one leg in side stride position on the stride rung:

Move 1:

side front support with one leg in side stride position on the stride rung

Move 2:

one-armed side front support with one leg in side stride position on the stride rung

e. Performing a move with and without bindings (=NO REPETITION)**Example**

Side rotation:

Move 1:

side rotation with bindings

Move 2:

side rotation without bindings

f. Big spiral: Performing the same move holding once in the rolling direction of the wheel and once against the rolling direction of the wheel (=NO REPETITION)**Example**

One-armed side rotation:

Move 1:

one-armed side rotation (= holding with arm in rolling direction)

Move 2:

one-armed side rotation (holding with arm against rolling direction)

g. Roll through the arms backwards holding the rims, side rotation, or reverse roll through the arms forwards holding the rims, side rotation (=E5c and E5d) (=NO REPETITION)**Further Regulations**

This particular variation of a side rotation on the lower rim, holding the lower rim, will not lose its difficulty even if there is another side rotation without bindings with E difficulty in the routine.

h. Performing the same move once with standing position on the lower rim and once with standing position on the upper rim (=NO REPETITION)

Examples

Side rotation:

Move 1:

Side rotation without bindings

Move 2:

Side rotation on the upper rim holding the upper rim

Side front support:

Move 1:

Side front support without bindings

Move 2:

Side front support on the upper rim holding the upper rim

i. Performing different changes with the same subsequent move (=NO REPETITION)

Examples

Free change without bindings (=D)

Move 1:

Side front support without bindings

Move 2:

Side front support without bindings

Free tip change without bindings (=D)

Move 1:

Side front support without bindings

Move 2:

Side front support without bindings

j. Performing the same move in vertical spiral without the gymnast's feet touching the wheel (=E31a and E31b) (=NO REPETITION)

Example

A vertical spiral in tuck hang (=E31a) and a vertical spiral in hanging position with legs extended behind (=E31b) will both be recognised as E difficulty if they are performed in the same routine.

4.5.3. Evaluation by the judges

There is no specific fixed deduction for a repetition, but repetitions can influence the level of recognised difficulty value as well as the length of a routine. The execution judges will also apply execution deductions to repeated moves.

4.5.3.1. Evaluation by the difficulty judges

- If a gymnast repeats a move in a routine, its difficulty will only be counted once (the first time it is performed). Move repetitions must be clearly recorded by the difficulty judges.
- If the same change is performed several times, the difficulty of the change will only be recognized the first time. For all repetitions, only the difficulty of the subsequent move will be counted (see 4.4.5.4).
- If the repetition of moves results in a routine being too long (more than 12 moves), the routine will be judged to contain too many moves. The difficulty judges will tell the head judge how many excess moves there were.
- The excess moves (from the 13th move onwards) will not be counted towards the total difficulty score of the routine. In addition, no bonus for fulfilled structure groups will be awarded in this case.
- Move repetitions will not be counted towards the minimum length of a routine, i.e. they will be considered missing moves in this context. The difficulty judges tell the head judge how many moves were missing.

4.5.3.2. Evaluation by the execution judges

- The execution judges evaluate the execution of all moves performed.

5. CATALOGUE OF DEDUCTIONS FOR SPIRAL

5.1. Specific deductions made by the execution judges in Spiral

	-0.1	-0.3	-0.5	-1.0
position change when the gymnast is the right way up does not take place between the two stride rungs	X	X		
position change when the gymnast is upside down does not take place between the two handle rungs	X	X		
a change of direction does not take place between the board rung against the original rolling direction and a point on the wheel rim halfway between the board rung and the stride rung in the original rolling direction of the wheel (or in an extended zone in the case of stride variations)	X	X		
tipping the wheel at the beginning of a routine: The gymnast does not achieve the body position for the first move until after the stride rung in rolling direction has passed the floor	X	X		
tipping from one rolling rim to the other: The change in rolling rims does not take place in the immediate vicinity of the boards (or in an extended zone in the case of stride variations)	X	X		
the transition from one move in small spiral to the next move in small spiral does not take place within one wheel rotation	X (1 extra rotation)	X (>1 extra rotation)		
more than 5 rotations in the transition from small spiral to big spiral or from small spiral to vertical spiral	X (1 extra rotation)	X (>1 extra rotation)		
more than 3 rotations in the transition from big spiral to small spiral and/or from small spiral to standing	X (1 extra rotation)	X (>1 extra rotation)		
more than 2 steps when stepping out of the wheel after the last move (finishing pose)	X			
incomplete judging unit (1 single wheel rotation) in big spiral before a change of the rim (tip over) or transition to small spiral or standing			X	
briefly on both wheel rims (i.e. less than $\frac{1}{4}$ wheel rotation)		X		

deviation from prescribed body positioning in the transition from big to small spiral		X		
the transition from small spiral to standing is not performed from the position of the preceding small spiral		X		
incorrect angle of inclination (minor deviation)		X (per move)		
angle of inclination of the wheel obviously too low in big spiral			X (per move)	
angle of inclination of the wheel obviously too high in small spiral			X (per move)	
more than 3 changes within one transition <u>NB:</u> The difficulty judges still count the difficulty of the change performed			X	
the transition from small spiral to standing is performed with the circular path of a big spiral			X	
the transition to standing is not performed in the immediate vicinity of the midline between the legs			X	
fall				X
wheel comes up into upright position on both rims (new tip necessary)				X
incorrect continuation of a routine in low side straddle stand after a fall (small spiral)				X
move cannot be defined as either small or big spiral (circular path of the wheel does not fit to either a small, big or vertical spiral)				X

IV.

Specific Regulations for Vault (VLT)

What's new?	
A new reverse mount is introduced. (pike mount from front lying with ½ turn)	see 5.4.1
Deductions for incorrect wheel size will be made by the head judge.	see 5.2
There is no longer a deduction for spending too much time on top of the wheel.	see 6.1
There is no longer a deduction for falling after a stable landing.	see 6.1
A new fixed difficulty catalogue will replace the previous modular system.	see VLT difficulty catalogue

1. THE VAULT DISCIPLINE

1.1. General regulations

In the Vault discipline, the gymnast performs two vaults. These two vaults may be the same or different. Each vault will be judged independently.

At international competitions organized by the IRV the better of the two individual scores will count as the final score.

It is also possible to use the arithmetic mean of the two individual vault scores as the final score, but this is not current IRV policy.

1.2. Description of a vault

The wheel is set in motion by the gymnast with a maximum of 2½ wheel rotations distance to a landing mat.

After a run-up, the gymnast mounts the wheel into a tuck support or straddle position, a forward or reverse standing position, or one of the overswing positions listed in the Difficulty Catalogue for Vault (also see VLT 5.4).

The gymnast then dismounts from the wheel by performing a jump, thrust, somersault, overswing, or any vault listed in the catalogue.

To finish the vault, the gymnast must land safely on the landing mat, showing a finishing position with legs together, indicating to the judges that the vault has been completed.

A 90cm zone is marked on the landing mat. The gymnast must land beyond this 90cm zone.

The gymnast should only compete a vault that he/she can perform with complete safety and a high degree of aesthetic and technical mastery.

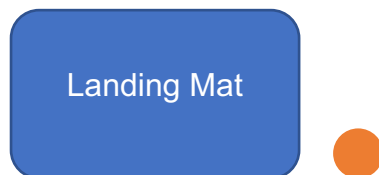
NB:

One coach must stand next to the landing mat in vault. (see GR 2.2.2)

2. POSITIONING OF THE JUDGING PANEL IN VAULT

The judging panel is usually positioned in a row.

Execution Judges – Difficulty Judges – Head Judge – Gymnast (starting position) - Coach



3. REGULATIONS GOVERNING WHEEL SIZES IN VAULT

3.1. Definition of correct wheel sizes

Gymnasts are obliged to use wheels that are appropriate for their height. A gymnast is allowed to use two different wheels for the two vaults. The wheel size for vault is regulated as follows:

Maximum wheel size

When standing in an upright position on the floor in between the boards, the gymnast must be able to reach both inner handles of the wheel simultaneously. The gymnast is allowed to stand on tiptoe and wear his/her vaulting shoes. It is not necessary for the gymnast to be able to hold the handles properly. It is sufficient for him/her to be able to touch the handles with his/her fingertips. If a gymnast fails to do so, the wheel is defined as too big. Performing a vault over a wheel that is too big will lead to an invalid vault (see VLT 5.3.4).

Minimum wheel size

A loose bar is placed across the wheel from one rung handle to the other. When standing on the boards in an upright position, the gymnast must not touch the bar with his/her head. If the gymnast touches the bar, the wheel is defined as too small. The gymnast is not allowed to take off his/her shoes. Performing a vault over a wheel that is too small will lead to a neutral deduction by the head judge (see VLT 5.2).

3.2. Checking of wheel sizes in a competition

In international competitions, a designated judge will be responsible for checking the wheel size of all gymnasts before they enter the competition area.

If there is no official checking of wheel size in a vault competition, it is the responsibility of the head judge to check the wheel size before the first vault.

The head judge can ask to check the wheel size either before the first vault, or immediately after the first vault. It is not possible for the head judge to ask to check the wheel size after the second vault.

If the wheel size is checked before the first vault and the wheel proves to be too big or too small, the gymnast is permitted to change the wheel and perform both vaults over a correctly sized wheel. In this case, no deductions will be made.

If the wheel size is checked after the first vault and the wheel proves to be too big or too small, the gymnast is permitted to change the wheel and perform the second vault over

a correctly sized wheel. In this case, the appropriate deductions will apply for the first vault.

4. BEGINNING, INTERRUPTION AND TERMINATION OF VAULTS

4.1. Beginning of the judging process

Before the judging process of a vault begins, the head judge signals the gymnast to start.

The movements necessary for the gymnast to get into position in the wheel, the setting in motion of the wheel, and the run-up, will not be evaluated by the judging panel.

The judging process starts with the take-off position of the feet on the floor.

4.2. Interruption of vaults

There are two cases where a vault may be interrupted:

4.2.1. Interruption by the gymnast

The run-up can be interrupted by the gymnast. In this case, he/she must raise an arm to signal to the judges that the run-up is being interrupted (maximum one time per vault). The gymnast is not permitted to touch the wheel in this case. The coach must stop the wheel after the gymnast has raised his/her arm.

After this type of interruption, the gymnast is allowed to repeat the vault once. No extra deductions will apply.

If the gymnast touches the wheel after having signaled an interruption, the final score for this vault will be 0.0.

If the gymnast interrupts the vault more than once, the final score of this vault will also be 0.0.

4.2.2. Interruption because of an obstacle

The run-up can also be interrupted by an obstacle (e.g. a photographer walking through the competition area; a wheel rolling through the competition area).

In this case, the gymnast is allowed to repeat the vault after the obstacle has been removed.

4.3. End of the judging process

The judging process ends with the gymnast in standing position with legs together (final pose) after landing from the vault.

5. THE EVALUATION OF VAULTS

5.1. Specific regulations governing the tasks of the head judge in Vault

The responsibilities of the head judge include:

- Checking that the marking of the 90cm safety zone has been carried out accurately (the edge of the tape furthest from the wheel should mark 90cm from the edge of the landing mat – width of tape used is irrelevant)
- Checking the length of the run-up
- Checking the sizes of the wheels used by the gymnast and making the relevant neutral deductions
- Assisting the difficulty judges in recognising the vault performed and acknowledging its difficulty value

5.2. Neutral deductions made by the head judge in vault

	-0.1	-0.3	-0.5	-1.0
Gymnast uses a wheel that is too small				X
gymnast needs more than 10 seconds to start the vault after signal from the head judge				X

5.3. Specific regulations governing the tasks of the difficulty judges in Vault

5.3.1. Vault categories

The difficulty judges evaluate each of the two vaults independently. The mounting phase does not have an influence on the difficulty score and is therefore only evaluated by the execution judges.

It is the task of the difficulty judges to identify the vault performed and assign it a difficulty value according to the **Catalogue of Vaults** (see Appendix). The difficulty judges may discuss with the head judge if necessary. If the vault cannot be identified as a vault described in the Catalogue of Vaults, the gymnast will receive a score of 0.0.

There are four different vault categories:

Category A	Vaults performed in a tuck or straddle position from arm support on the wheel
Category B	Vaults performed from a forward standing position on the wheel
Category C	Vaults performed from a reverse standing position on the wheel
Category D	Vaults performed using an overswing technique

The **Catalogue of Vaults** lists all the vaults in each category, states their difficulty and describes the technique required to perform them correctly. An overview of common faults and associated deductions is also provided.

An overview of all vaults and their difficulty values can be found in the **difficulty table** in the Catalogue of Vaults (see Appendix).

5.3.2. Definition of body positions and recognition of difficulty

Each somersault can be performed in a tuck, pike or straight position. The body positions are defined by the angles of the hip and knees as follows:

A perfect **straight body position** is one in which a line from the shoulders through the hips to the ankles is straight or slightly bent forwards or backwards. If the hip assumes a flexion of more than 45° during the vault, it will be considered piked.

A perfect **pike body position** is one in which the knees are straight and the hips are bent at least 90° from the extended position. If the knees assume a flexion of more than 45° during the vault, it will be considered tucked.

A perfect **tuck body position** is one in which the hips are strongly bent and the bent knees are brought to the chest – a minimum 90° bend in each.

Deviations from these body positions can lead to an up- or downgrading of the difficulty score. They will also result in minor deductions applied by the execution judges.

5.3.3. Recognition of twists

In the case of vaults with an additional twist in the flight phase, the gymnast must fully complete the twist in order for the bonus to be given. A margin of error of up to 30° is permitted (judged by the landing position of the feet) and will incur a minor deduction.

This means that if a gymnast announces a somersault with 1½ twists (=540°), but does not achieve at least 510° before landing, the difficulty judges will only award the bonus for a full twist (=360°). Deductions for execution will also apply.

5.3.4. Invalid vaults

A vault will be invalid (fixed final score: 0.0) in the following cases:

- The wheel rolls back with the gymnast still on it (no dismount performed).
- Assistance from the coach before the gymnast has left the wheel.
- The vault performed varies to such an extent from any of the vaults listed in the *Catalogue of Vaults*, that it cannot be identified
- The vault is not landed with feet first.
- The gymnast uses a wheel that is too big.
- The gymnast interrupts the run-up of a vault more than once or touches the wheel after having interrupted the run-up.

An invalid vault will be discussed by the head judge and the difficulty judges, who will then inform the execution judges.

5.4. Specific regulations governing the tasks of the execution judges

The two vaults will be judged independently by the execution judges.

5.4.1. Definition of judging units for execution in Vault

Each vault is divided into four units:

Unit 1 – Setting the wheel in motion, run-up

Unit 2 – Take-off, mounting phase

Unit 3 – Thrust with hands or feet from the wheel, flight phase

Unit 4 – Landing

The evaluation of a vault does not start until Unit 2. Unit 1 will not be evaluated by the judging panel.

All deductions made in units 2, 3 and 4 are accumulated. There is no maximum for the sum of deductions per unit and the same deduction can be made more than once within a unit (see GR 5.3.2).

Minor deductions are made in addition to fixed and variable deductions.

The four judging units are described as follows:

Unit 1 – Setting wheel in motion, run-up

The gymnast awaits a signal from the head judge before setting the wheel in motion.

There is no prescribed manner in which to set the wheel in motion, but two of the most usual methods are described below:

- a. The gymnast stands on the floor between the inner handles, reaches to hold the upper inner handle and pulls it downwards. The gymnast crouches down to allow the wheel to roll freely before letting go as the handle he/she is holding passes the floor. The gymnast then stands up and prepares for the run-up.
- b. The gymnast stands on the boards of the wheel and holds the front inner handle. He/she lifts feet onto the front rung and allows the wheel to roll forwards. As the rung reaches the floor, the gymnast jumps onto the floor in the same crouching position as in the previously described method. The gymnast releases hold on the handle, allows the wheel to roll and stands up to prepare for the run-up.

The gymnast can use maximum $2\frac{1}{2}$ wheel rotations to perform the vault.

The run-up can be interrupted by the gymnast (once only) by raising an arm to signal the interruption to the judges (see VLT 4.2.1).

Unit 1 finishes immediately before take-off from the floor after the run-up.

Unit 2 – Take-off, mounting phase

The judges' evaluation of execution starts from the take-off position on the floor.

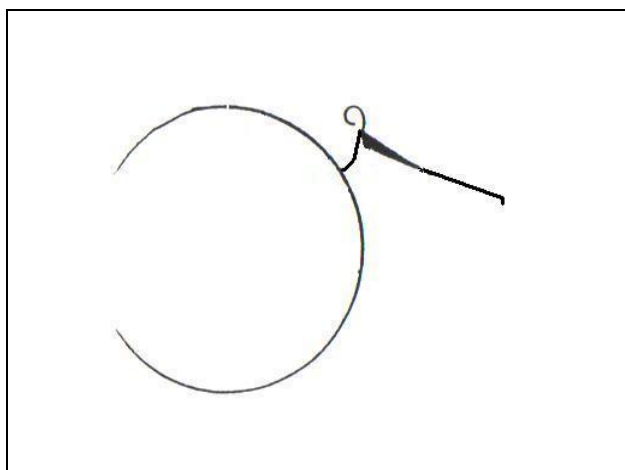
Take-off must be from two feet. The gymnast holds a rung or the rims of the wheel, evenly positioned with one hand on each rim.

The mounting phase (layout, pike, handstand, reverse or none) for each vault is defined in the *Catalogue of Vaults*.

Unit 2 finishes immediately before the gymnast thrusts with hands or feet from the wheel.

The following variations for mounting the wheel are possible:

Layout mount

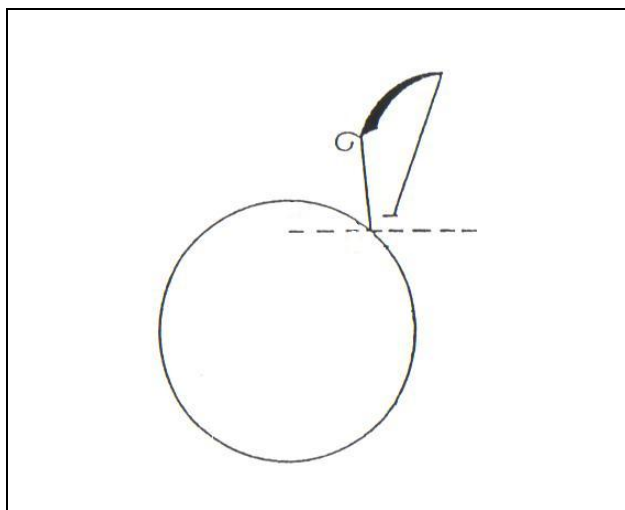


A **layout mount** requires the following technique: Take-off close to the wheel. Hands grip the wheel at approximately waist height (no prescribed grip zone). Arms can be slightly bent (minimum elbow angle 135°), elbows must not be placed on the wheel. Legs (straight) should rise almost to the horizontal (160° - 180° angle to floor), hips extended, acute angle ($<90^\circ$) between arms and upper body, body slightly arched.

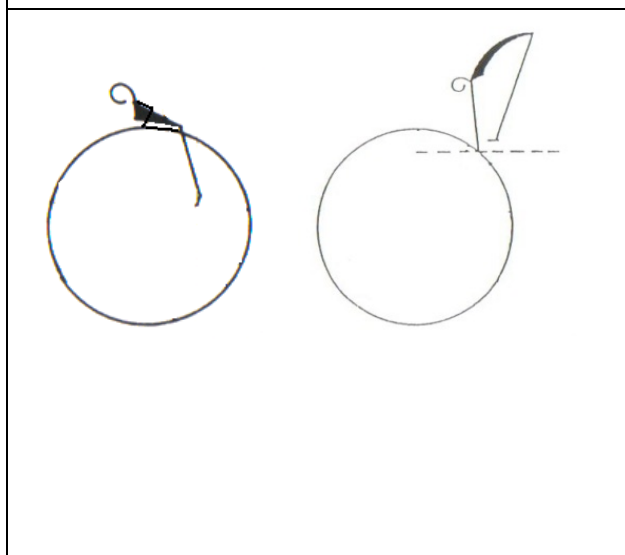
Pike mount

A pike mount is used to achieve a standing position forwards on the wheel.

There are two alternative ways of performing a pike mount:



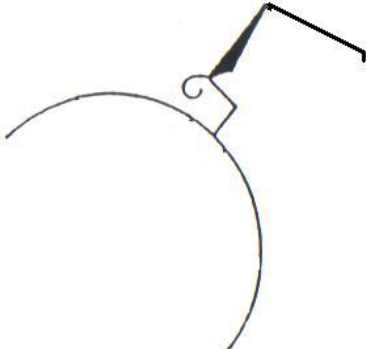
A **pike mount from the floor** requires the following technique: Take-off close to the wheel. Hands grip the wheel rims at approximately waist height (no prescribed grip zone, alternatively the gymnast can also grip one of the rungs). Arms can be slightly bent (minimum elbow angle 135°). Closed hip angle with hips rising to above shoulder level. Feet above level of hands on wheel, angle between arms and upper body greater than 90° . Legs straight throughout.



A **pike mount from front lying** requires the following technique: Take-off from two feet close to the wheel into immediate front lying on one of the rungs, hands holding the rims next to the rung or the rung. Legs swing forwards towards the centre of the wheel and then backwards and upwards into a pike position, arms can be slightly bent (elbow angle not less than 135°). Pike onto wheel should be achieved as for pike mount from floor (see above). Closed hip angle with hips rising to above shoulder level. Feet above level of hands on wheel,

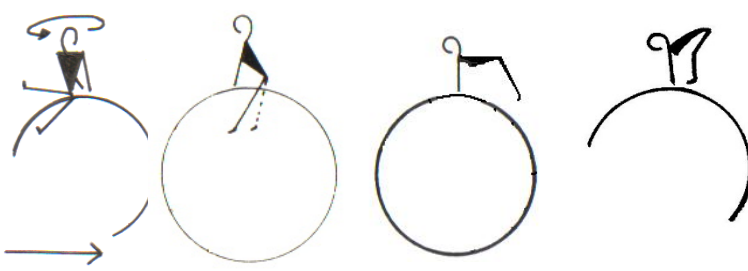
	angle between arms and upper body greater than 90°. Legs straight throughout. The pike mount from front lying can also be performed with a ½ turn to reach a reverse standing position on top of the wheel (see technique for pike mount with ½ turn below).
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Handstand mount

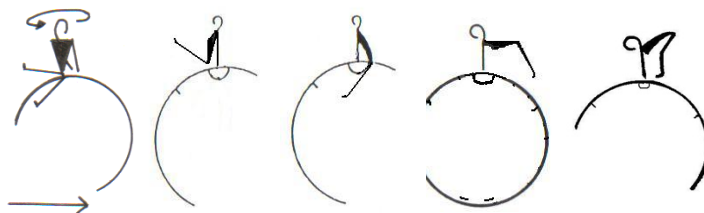
	A handstand mount requires the following technique: Take-off close to the wheel. Hands grip the wheel at approximately waist height to hold the rims (no prescribed grip zone). Elbow angle minimum 90°, hip angle 90°-180°, feet above level of hands on wheel, legs straight.
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A **reverse mount** is used to achieve a position from which a backwards vault from standing position on the wheel can be performed.

There are four alternative ways of performing a reverse mount:

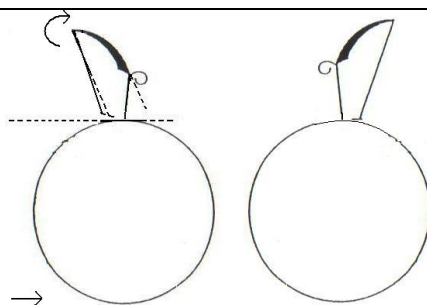
	<p>Reverse mount with straddle backswing</p> <p>The following technique is required: Take-off close to the wheel. Hands grip the wheel rims at approximately waist height (slight bending of arms permitted - elbow angle not less than 135° - no prescribed grip zone). Immediately after take-off, the gymnast performs a half turn into a backward straddle position on the wheel. The hands are then released from the original holding position and the upper body is untwisted so that the gymnast can re-grasp the rims in front of the backward straddle sitting position. As soon as the gymnast has re-grasped the rims of the wheel, the legs are swung backwards and upwards in a single movement (no 'extra swing' permitted). Legs remain straight,</p>
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feet extended, hip angle gradually closing until hips have reached at least shoulder level, after which the gymnast is permitted to bend his/her legs (knee angle not less than 90°) in order to place feet on the wheel immediately behind the hands ready for a pike standing position backwards on top of the wheel.



Reverse mount with pike backswing

The following technique is required: Take-off close to the wheel. Hands grip the wheel rims at approximately waist height (slight bending of arms permitted - elbow angle not less than 135° - no prescribed grip zone, but this mount is only possible if the hands are close to the outer handles). Immediately after take-off, the gymnast performs a half turn into a backward straddle position on the wheel. The hands are then released from the original holding position and the upper body is untwisted so that the gymnast can re-grasp the rims behind the backward straddle sitting position. As soon as the gymnast has re-grasped the rims of the wheel, the legs are brought together in front of the gymnast, passing through a half lever or pike support position before swinging/lifting the legs backwards and upwards between the rims of the wheel (closed hip angle). Legs remain straight, feet extended, until the hips are above shoulder level, in order to place the feet on the wheel immediately behind the hands ready for a pike standing position backwards on top of the wheel.



Pike mount with $\frac{1}{2}$ turn

The following technique is required: Take-off close to the wheel. Hands grip the wheel rims at approximately waist height (no prescribed grip zone). Arms can be slightly bent (minimum elbow angle 135°). Closed hip angle with hips rising to above shoulder level. Feet above level of hands on wheel, angle between arms and upper body greater than 90° . Legs straight. The turn is initiated from the hips and one foot is placed on the rim behind the opposite hand. The second foot is then placed behind the other hand, which is released to re-grip in front of the first leg (half-turn completed), while the first hand is moved across to the other rim. It is also possible to place both feet at the same time

before performing the half turn. The gymnast should then be ready for a pike standing position backwards on top of the wheel. Legs should be straight throughout. Minor deductions will be made for bent legs and/or re-positioning of feet on top of the wheel.



Reverse mount from front lying with straddle backswing

(NB: pike backswing not possible because the rung blocks the swing)

A reverse mount from front lying with $\frac{1}{2}$ turn requires the following technique: Take-off close to the wheel into immediate front lying on one of the rungs, hands holding the rims next to the rung. Legs swing forwards towards the centre of the wheel and then backwards to perform an immediate half turn into a back straddle sitting position on the wheel. The hands are then released from the original holding position and the upper body is untwisted so that the gymnast can re-grasp the rims in front of the backward straddle sitting position. As soon as the gymnast has re-grasped the rims of the wheel, the legs are swung/lifted backwards and upwards in a single movement (no 'extra swing' permitted). Legs remain straight, feet extended, hip angle gradually closing until hips have reached at least shoulder level, in order to place feet on the wheel immediately behind the hands, ready for a pike standing position backwards on top of the wheel.

At the end of a reverse mount (one of four alternatives described above) the gymnast must end up in a pike standing position with straight legs. The gymnast can then either remain in a pike standing position or stand upright on the wheel before thrusting from the wheel. If the gymnast remains in a pike standing position, the arms will stay low and be brought backwards past the lower body as the gymnast prepares for the flight phase. If the gymnast chooses to stand upright on the wheel, the arms may be elevated above the head or kept at the side of the body. Legs must be seen to be straight in both cases. As the gymnast initiates the flight phase of the vault, it will be necessary to bend the legs again briefly in order to achieve a powerful take-off from the wheel.

Special case:

Vaults with no mounting phase

There are some vaults that are performed without one of the above mounting phases. These include the straddle and tuck vaults (A5 and A6 in the *Catalogue of Vaults*), both of which depend upon a very fast run-up and a mounting phase that is integrated into the position on top of the wheel. In addition, vaults D4, D5 and D6 are performed such that the gymnast adopts a front lying position on one of the rungs immediately after take-off from the floor.

Unit 3 – Thrust with hands or feet from the wheel, flight phase

Unit 3 starts with the thrust from the wheel, initiated by the gymnast's hands or feet.

After leaving the wheel, the gymnast must gain height. This is achieved by way of a thrust with hands or feet from the wheel. From a standing position on the wheel, this is achieved by the gymnast jumping upwards and away from the wheel. In all other vaults, it is achieved by way of a thrust from the hands, sometimes combined with a leg swing movement. The thrust should leave the wheel almost stationary.

All vaults must have an identifiable flight phase.

The prescribed height of the flight phase is defined in the *Catalogue of Vaults*.

All vaults should achieve a minimum length of 90 cm in the flight phase (landing mats should be marked with tape). Both feet must be clear of this line on landing. If any part of the gymnast's body touches or crosses the line at the point of landing, a fixed deduction of 0.5 will be made in unit 4 (landing). This requirement has been introduced in order to ensure maximum safety in the vault discipline. The distance should represent a minimum safety clearance that can be applied to all wheel sizes.

Unit 3 finishes immediately before landing.

Unit 4 – Landing

The gymnast should land in a stable position on two feet (legs bent and up to shoulder width apart), arms in front or side position – no steps permitted.

The gymnast should land beyond the 90cm safety zone marked on the landing mat.

After every landing (even an unsuccessful one) the gymnast should finish in a standing position, legs together (final pose), indicating to the judges that the vault has been completed.

Unit 4 finishes with the gymnast reaching the final position described above.

6. CATALOGUE OF DEDUCTIONS FOR VAULT

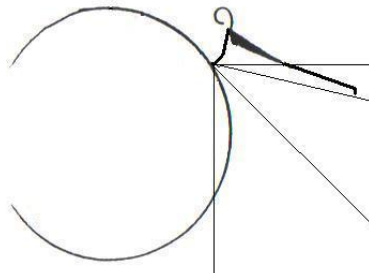
6.1. Specific deductions made by the execution judges in Vault

Unit 2 - mounting phase

	-0.1	-0.3	-0.5	-1.0
incorrect/non-definable mounting phase				X
take-off from the floor from one foot			X	
insufficient height in mounting phase (see description below)	X	X	X	X
shoulders below (or weight resting on) the rims of the wheel in overswing vaults				X
elbow angle less than 135° in the mounting phase of all vaults other than those performed with a handstand mount		X		
elbow angle less than 90° in vaults performed with a handstand mount			X	
elbows touching wheel in mounting phase				X
body resting on elbows in overswing vaults performed from sitting or lying position			X	
extra leg swing in a reverse mount onto the wheel			X	
knee angle less than 90° as gymnast places feet on wheel in reverse mount			X	
legs not straightened before thrust from wheel in vaults performed from a reverse mount		X		
overswing vaults initiated by bending knees			X	
flight phase in straddle vault (A1) initiated by bending knees			X	
feet below the rims of the wheel in vault A6 (tuck over)				X
major correction of holding, sitting, lying or standing position in order to maintain balance on top of the wheel			X	
wheel touches the landing mats before the gymnast has left the wheel (without being severely impaired or slowed down)			X	
wheel rolls into the landing mat such that the rolling movement is severely impaired and the wheel slows down considerably (in this case, the fixed 0.5 deduction for the wheel touching the mat will not be applied)				X

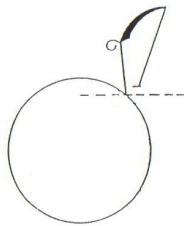
Deduction for insufficient height in mounting phase

Layout mount



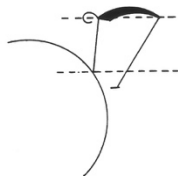
leg angle to floor more or equal to 160°	=no deduction
leg angle to floor between 135° and 160°	=0.3 deduction
leg angle to floor between 90° and 135°	=0.5 deduction
leg angle to floor 90°	=1.0 deduction

Pike mount and pike mount with ½ turn



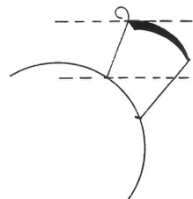
no deduction

correct execution
(hips above shoulder level)



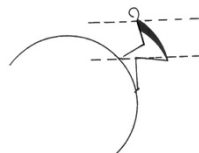
0.1 deduction

hips approximately equal to shoulder level



0.3 deduction

hips slightly below shoulder level



0.5 deduction

hips below shoulder level



1.0 deduction

no attempt to lift hips

Handstand mounts**no deduction**

correct execution

**0.1 deduction**

feet around level of hands, hip angle approximately 90°

**0.3 deduction**feet below level of hands, hip angle $<90^\circ$,
body away from elbows**0.5 deduction**feet below level of hands, hip angle $<90^\circ$,
body resting on elbows

Unit 3 – flight phase

	-0.1	-0.3	-0.5	-1.0
lack of height in flight phase	X	X	X	X
coach touches either gymnast or wheel after the gymnast has left the wheel but before he/she has landed				X
gymnast in contact with wheel during flight phase				X
lack of body extension immediately after thrust from wheel	X	X		
hip angle more than 90° in tuck/pike straddle positions		X		
knee angle more than 90° in tuck position		X		
slightly bent knees in a pike somersault (up to 45° flexion)		X		
legs not together in tuck/pike/straight positions		X		
legs crossed during twists	X			
up to 30° deviation from a full or half twist		X		
tuck/pike/straddle position not executed at highest point of flight phase in vaults performed from a standing position on top of the wheel	X	X		
hip angle in first half of straight front somersault less than 160° – NB: if the hip angle is less than 135° the somersault will be downgraded from straight to pike			X	
hip angle in second half of a straight back somersault less than 160° (in this case no additional deduction for lack of extension before landing) – NB: if the hip angle is less than 135° the somersault will be downgraded from straight to pike			X	
pike back somersault initiated with bent knees (i.e. gymnast uses knee bend to create initial rotation)			X	
pike or straight gainer back somersault initiated with bent knees (i.e. gymnast uses knee bend to create initial rotation)			X	
front somersault with ½ twist where the gymnast performs the half twist in the first half of the somersault			X	
wheel brought out of line during thrust from wheel in overswing vaults	X	X		
no identifiable handstand position during thrust from wheel in overswing vaults			X	
twists initiated before thrust from wheel in twisting overswing vaults			X	
gymnast is still in contact with the wheel after the first ½ twist has been completed in overswing vaults with at least a full twist				X

Unit 4 – Landing

	-0.1	-0.3	-0.5	-1.0
steps on landing (see description below)	X	X	X	
flight phase too short. (The gymnast must land feet first beyond the 90cm minimum marking on the landing mats. The deduction will be made if the gymnast touches or crosses the line on his/her initial landing. As long as the gymnast makes his/her initial landing without touching or crossing the 90cm line, any subsequent steps or falls backwards across the line will not incur this deduction but will be subject to deductions for steps or fall on landing.)			X	
gymnast brushes his/her hands on the floor on landing		X		
gymnast does not finish his/her vault in a standing position with feet together (even after a fall) (=no final position)		X		
fall after landing on feet first				X
Uncontrolled body movements after landing a dismount or vault ("shaking" of the body)		X		
Uncontrolled arm movements after landing a dismount or vault		X		
hips below knee level on landing				X

Steps on landing

1 step	-0.1 pt.
2 steps or 1 jump	-0.3 pt.
>2 steps	-0.5 pt.

APPENDIX

This Appendix contains important definitions for straight-line and spiral from the draft version of the new Technical Language of Wheel Gymnastics.

It provides precise descriptions of judging units and transitions as well as further information on evaluating difficulty and execution.

STL A1 Discipline description: Straight-Line

The wheel is set in motion on both rims. The imaginary lines traced by the rims in contact with the floor are parallel.

The imaginary wheel axis thus moves in a straight line. This translational movement is superimposed by a rotation around the middle axis of the rolling wheel.

The gymnast is either in or on the wheel and uses a transfer of body mass in order to achieve a positive or negative acceleration of the wheel. For this transfer of body mass, the vertical axis (perpendicular to the floor) through the middle of the wheel is important.

If the centre of body mass moves away from this vertical axis, there will be an acceleration that will influence a horizontal movement of the central axis of the wheel in the corresponding direction. The further the centre of body mass moves away from the vertical axis, the faster the acceleration. If the centre of body mass is brought back to the vertical axis, the central axis of the wheel will have a uniform (unaccelerated) movement. If the centre of body mass is moved to the other side of vertical axis, the wheel movement will be slowed down (i.e. negative acceleration). The further away the centre of body mass is moved from the vertical axis, the greater the decelerating effect on the wheel (loss of momentum through friction is not taken into account).

STL A2 Conceptual definition and categorisation of elements

Definition of an element

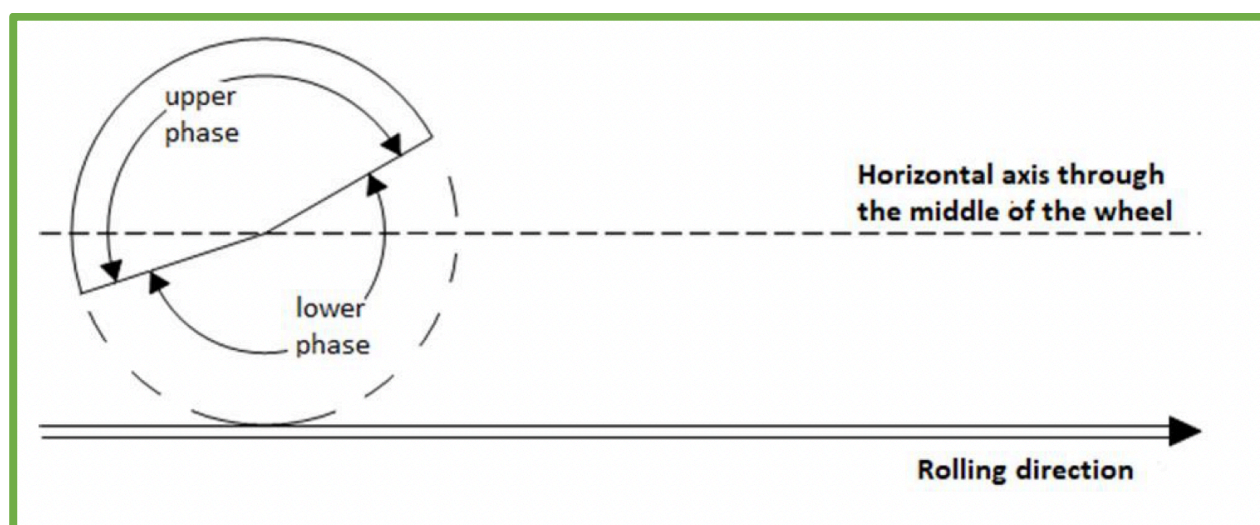
Elements are the smallest describable units of movements in gym wheel gymnastics, with which gymnastics positions, movements and series of movements can be described and named. For. Example, elements can be individual positions, movements of the arms and legs or of the entire body. The deciding factor is that we are describing gym wheel specific movements. In view of the same or similar body positioning or technical movement of the gymnast, it is appropriate to divide elements into the following categories:

Centralised elements

The centre of body mass remains mainly in the middle of the wheel throughout the element and/or the points of contact between the gymnast and the wheel are wide apart. Centralised elements can be performed as centralised moves or as transitions, e.g. gathering momentum, or as connections between decentralised elements.

Decentralised elements

The centre of body mass is mainly at the edge of the wheel throughout the element and/or the points of contact between the gymnast and the wheel are close together. Decentralised elements are performed in an upper or lower phase. In the upper phase the main part of the body mass is above the horizontal axis through the middle of the wheel, while in the lower phase it is below this horizontal axis. The beginning and end of an upper/lower phase depends upon the rolling direction of the wheel. For example, the upper phase in rolling direction can start before the horizontal axis is achieved. The lower phase usually starts significantly before achieving the horizontal axis in the rolling direction. The boundary between the upper and lower phase should be approximately as illustrated in the diagram below:



STL A3 Conceptual definition and categorisation of moves, units and lengths

Definition of a move in straight-line

A move is a countable entity through which a certain spatial and/or temporal sequence (i.e. the beginning and end of a wheel gymnastics movement) is determined, within which one element or more elements are connected. In some cases, the beginning and end of a move is clearly defined by spatial factors, e.g. centralised moves. In other cases, e.g. decentralised moves, the beginning and end of a move is defined according to set criteria (decided by the responsible technical commission). The fixed definition of moves is used primarily in order to be able to provide precise descriptions of compulsory and voluntary routines. Transitions are used to connect moves together.

Definition of a centralised move in straight-line

A centralised move consists of one or more centralised elements performed within one rotation of the wheel. During a centralised move the gymnast starts in an upright position, passes through an inverted position and ends back in an upright position, all in the same rolling direction. A distinction is made between moves in which one element is performed during the entire wheel rotation and moves containing element combinations in which several elements are performed consecutively with a change of position when the gymnast is upside down.

Definition of a decentralised move in straight-line

A decentralised move consists of an upper phase leading directly into a lower phase. The upper phase can contain just one decentralised element, or it can consist of several consecutive decentralised elements. The wheel must move at least a 1/2 wheel rotation (including the lower phase) during a decentralised move.

Reference to the Code of Points: When counting decentralised moves: A decentralised move always begins with the upper phase.

Definition of units in straight-line

The unit is relevant for the judging of gym wheel moves and elements. The execution judges make deductions per unit in accordance with the Code of Points.

Units in straight-line

- Centralised moves with preceding transition (this includes preceding transitions that are changes of direction with their own elements)
- Decentralised moves

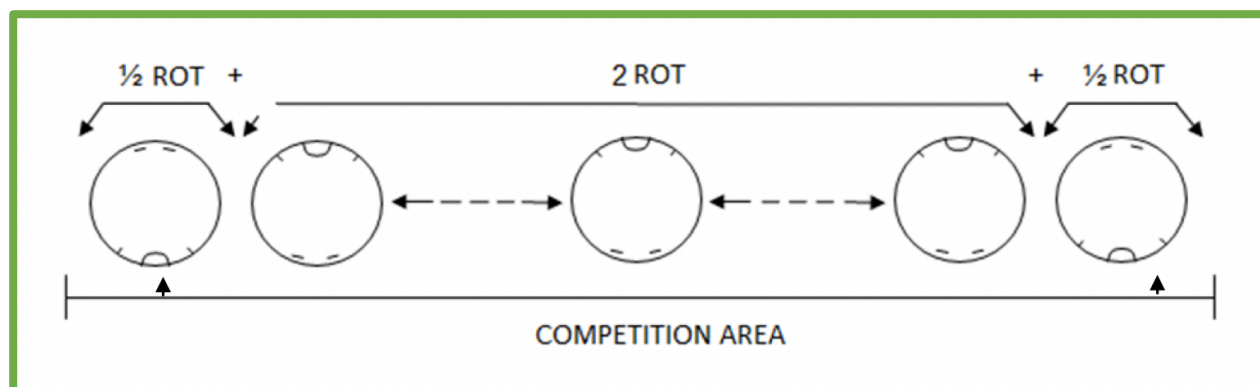
- Individual upper phases that occur immediately before a centralised element, a centralised change of direction, walking in the wheel, or dismount
- Dismount

Dismount in straight-line

A dismount is defined as leaving the apparatus via a flight phase to land in a standing position with legs together outside the wheel.

Definition of a length in straight-line

A new length starts after a change of direction (apart from when initiating momentum at the beginning of routine). A length consists of maximum two rotations in one direction (starting from a wheel position with the boards at the bottom to the same position after two rotations). Both before and after this position, the gymnast is permitted to roll an additional half wheel rotation (until the rim handles are closest to the floor).



It is also possible to have lengths that are less than two rotations of the wheel. In order to differentiate between a "new length" and "rolling back", the following applies:

New length

- Centralised moves. A new length will be counted if there is at least one rotation of the wheel between two changes of direction. The starting point is the gymnast in an upright position and the ending point is when the gymnast returns to an upright position.
- Decentralised moves: In principle, a new length is counted when a lower phase takes place in a new rolling direction after an upper phase with a change of direction. This is true regardless of the length of the lower phase, i.e. even if the lower phase is only 1/2 a wheel rotation or less, it will be counted as the beginning of a new length. It is important to differentiate between this case, a briefly stationary wheel and an extra swing.
- Special case: If the gymnast performs a standing swing between a change of direction and dismount, the standing swing will be counted as a new length.

Rolling back

- Centralised moves: A rolling back is counted if there is a change of direction before the wheel rotation is completed in a centralised move and the wheel rolls back in the opposite direction.
- Decentralised moves: There is only one case where a "rolling back" is counted in connection with decentralised moves: This is when the gymnast slows the wheel down after a lower phase without continuing into an upper phase. The gymnast then performs a single or double swing [usually in (stride) standing on the boards or a rung handle/rung and wheel rim].

STL A4 Principles of body positioning

- The head of the gymnast is in line with an extension of the backbone. The gymnast focuses his/her eyes in front, perpendicular to the shoulder axis.
- In a straight position the free arm(s) is (are) straight and elevated to the side in the same plane as the body. The elbows are between shoulder and eye level. The hands are held in line with the arms with fingers together and straight. Thumbs are held next to fingers. The palms of the hands face the floor when the gymnast is in an upright position.
- In a side position the free arms are bent and supported in front of the body in the hip area. The hands are in a direct extension of the lower arms. The elbows are in the same plane as the front of the body, fingers are together and straight, while the thumb points backwards and away from the fingers to a support position at the front of the hip bone on the same side as the arm.
- In a side position the front of each foot in bindings is turned outwards and stretched over the outer edge of the board so that the binding is tight (foot pressure technique).
- In a straight position the front of each foot in bindings is pointed forwards. The tip of the front foot is stretched over the outer edge of the board, while the tip of the back foot is pressed over the inner edge of the board and against the board (foot pressure technique).
- In addition to the foot pressure technique, there is also a foot hanging technique (also known as trapeze hang). This technique involves lifting the tip of the foot or feet in bindings so that the gymnast “hangs” in the binding. This technique is used for turns in bindings and for moves performed behind in the spiral discipline.
- In the case of elements in one binding performed in a straight position, the free foot is placed next to the foot in bindings (legs together). For elements performed in a side position, the free foot is placed with its inner side next to the heel of the foot in bindings
- If one foot (or both feet) is/are outside the bindings, the following applies: Any part of the foot can count as the standing area (e.g. standing on the ball of the feet, standing on the sole of the feet, standing on the toes ...).
- In general, arms, legs and hips are extended and straight. Deviations from this general rule must be specifically described.

STL A5 Catalogue of Transitions in Straight-line

Start of a routine

Starting the routine with a centralised move in bindings: gathering momentum

When gathering momentum at the beginning of a routine, the gymnast starts by transferring his/her centre of mass against the rolling direction. In doing this, only the leg in the (new) rolling direction should be bent, while the other leg remains straight. By straightening the leg (in the new) rolling direction, the wheel is set in motion.

When starting the routine in a straight position the arms must be held elevated to the side when gathering momentum, after which the gymnast can hold the wheel in the relevant position. When starting the routine in a side position, the hand in (the new) rolling direction holds in the correct grip (according to the subsequent element), while the hand against the rolling direction is free and swings through behind at the same time as the upper body turns approx. $1/8 - 1/4$.

If after gathering momentum in a side position the gymnast is going to perform a side free-fly or one-armed element holding against rolling direction, the gymnast will gather momentum without holding the wheel. In the case, the hands will be on the hips. For straight-line to music it is also possible to start a routine in bindings without gathering momentum.

Starting a routine with a centralised move without bindings or a decentralised move

For routines to music the beginning of the routine is not defined. For example, it can start directly with an element in the upper phase. There is no uniform description of the execution, but there are general rules described in the Code of Points (e.g. the gymnast needs to hold the starting position on or in the wheel independently and for a certain length of time).

Change of position in upright and inverted position

Change of arm and hand positioning

- In a side position, without turning the body

Both hands are released at the same time and moved directly to the new holding position. There must be a moment where both hands are completely detached from the wheel and the arms extended if possible. Extension of an arm is not necessary if it is prevented by a wheel rung.

- In a straight position, without turning the body

The arms are released simultaneously from their previous position and briefly pass through a side elevated position. Both hands must establish the new holding position at the same time.

- With a 1/4 turn

→ From side position to straight position

The hands are released simultaneously during the turn and brought by the shortest route possible into a side elevated position. Both hands then establish the new holding position at the same time

→ From straight position to side position

The hands are released simultaneously before the turn and elevated to the side. During the turn, both hands are then brought simultaneously and by the shortest route possible into their new position.

- With a 1/2 turn or 1/1 turn

The arms are released simultaneously from their previous position and elevated to the side. They can be lowered slightly during the turn in order to avoid contact with a wheel handle or rim. Once the new direction of movement has been established, the arms remain for a moment in a side elevated position before taking up a possible new position.

- Change of position with change of grip

At the end of an element the gymnast changes grip directly into the next element, whereby the free arm should be extended but brought into its new holding position by the shortest route possible. The gymnast must have one hand in contact with the wheel throughout the change of position. If more than one type of grip is possible, the specific grip required should be described. In a change of position with a change of grip and a turn, the grip change initiates the transition movement.

- Change of position with a downward turn (turn under one arm)

In a downward turn (turn under one arm), the gymnast starts by establishing the required grip with one hand on the wheel (if it is not already in the correct position from the previous move). The other arm is then released from its position (if applicable) and the now free arm initiates a turn under the holding arm.

- Change of position with an inward or outward turn

An inward or outward turn is always performed while retaining the holding position of both hands. During an inward turn, the arms go from uncrossed to crossed, while in an outward turn they go from crossed to uncrossed. When performing an inward turn from a radial grip, the grip type changes automatically: one hand ends up in an ulna grip with outward rotation. When performing an inward turn from an underarm or overarm grip on a rung (or rung handle), the following applies: underarm grip becomes overarm grip and overarm grip becomes underarm grip. When performing an outward turn, the opposite applies. The different types of grip that occur as a result of inward and outward turns (i.e. without letting go of the wheel) are not described separately.

Change of leg and foot positioning

Turning the feet

- Turning the feet in both bindings

The foot is flexed away from its pointed position against the side of the board, turned, then usually pressed back against the board again. However, it is also possible to keep the feet in a flexed position (trapeze hang technique) after the turn. It does not matter which foot is turned first or whether both feet are turned at the same time. It is important, however, that feet and body turn at the same time. The gymnast should not turn the upper body first and then the feet.

- Turning a foot in one binding when in an inverted position

In this case, it is necessary to differentiate between the trapeze hang technique, where the toes are flexed away from the board before and during the turn (and usually afterwards too), and the foot pressure technique, where the foot is not flexed until immediately before the turn and is then pointed and pressed against the side of the board immediately after the turn. The decisive factor in both cases is that the turning of foot and body should happen simultaneously. i.e. the gymnast should not turn his/her upper body first and the foot afterwards.

- Turning both feet with legs together

Unless otherwise described, the feet remain parallel and next to each other throughout a turn with legs together.

Taking one or both feet out of the bindings

Legs must remain straight when taking feet out of the bindings. The gymnast should avoid getting stuck in a binding.

Stride positions

When moving into a stride position in front, behind, across or to the side, the stride leg remains straight throughout the movement. Unless otherwise stated, the stride leg should be moved via the shortest possible route. If in doubt, the stride leg is moved directly past the standing leg and into the new position.

For stride positions in front, behind, across and to the side without placing the foot on the wheel, the stride leg must achieve an angle of at least 45°. It is of course possible to combine stride positions within a move containing an element combination. E.g.: From a side rotation with side stride position on the rung, via a side rotation with a stride position in front, into a side rotation with a cross stride position to the rung against the rolling direction.

In the case of a stride position with a bent knee in front or to the side, the leg in front or to the side is bent and the foot/toes placed at knee level against the standing leg.

In addition to these static stride variations, there are also leg movements, such as circular leg movements, alternating stride positions, or cross stride positions that are usually only performed in connection with specific elements or in straight-line routines to music, in which case they are described separately.

Lifting and lowering of legs, take-off

• Stepped change of position

In the case of a transition involving a stepped change of position without bindings, first one foot and then the other is brought into its new position, whereby one foot is always in contact with the wheel and legs are straight. Walking in the wheel is a type of stepped position change: In this case, the gymnast steps from one rung, board or rung handle to the next until the desired final position is reached. In straight-line, walking in the wheel is usually performed without holding on with the hands.

• Tuck change of position

Lifting/lowering the legs in a tuck position:

In this type of transition without bindings, the legs are brought together and lifted directly from the preceding position into the described tuck position with legs together. When lifting into a new position, the gymnast should avoid jumping from his/her standing position. When lowering into a new position, the speed of the wheel must be slowed down so that the placing of the feet takes place softly and without noise. The gymnast's legs/feet should only be opened into a stride or straddle position (if this is prescribed) immediately before the feet are placed on the wheel. The gymnast is permitted to bend his/her arms in this process.

Tuck take-off from the floor:

In this case, the tuck change of position is initiated from a strong take-off from the floor. It is a dynamic change of position, where both the take-off and the placement of the feet into a new standing position are clearly audible.

- Angled change of position

Lifting/lowering the legs in an angled position:

In this type of transition without bindings, the legs are brought together and straightened directly from the preceding position before being placed into the specified final position. The hip angle varies according to the starting and finishing position. With regard to the lifting and lowering of the gymnast's centre of body mass, the same rules apply as for the tuck change of position.

Angled take-off from the floor:

After the take-off from the floor, which is performed with bent knees, the legs are immediately brought together and straightened. As for the tuck variation of this transition, the angled take-off from the floor and placement of the feet into a new standing position are clearly audible.

- Straddle change of position

Lifting/lowering the legs in a straddle position:

The legs are simultaneously straddled and straightened directly from one position and into the next. The hip angle varies according to the starting and finishing position. With regard to the lifting and lowering of the gymnast's centre of body mass, the same rules apply as for the tuck change of position.

Straddle take-off from the floor:

After take-off from the floor, which is performed with bent knees, the legs are immediately straightened and brought into a straddle position. As for the tuck and angled variations of this transition, the straddle take-off from the floor and placement of the feet into a new standing position are clearly audible.

Standing swing

In the case of this transition, we are looking at an element whose main purpose is to give the gymnast enough momentum to be able to perform the next element in an upper phase.

The gymnast stands on the wheel rim/rung/board, with hands holding the rims above head level. By lifting the legs (e.g. tucked, angled, stepped...) onto one or two of the rung handles/rungs/boards (usually the boards) in front, the gymnast can transfer momentum to the wheel – as in the lower phase of a decentralised element. After releasing the hands

and swinging through, the gymnast can reach behind to hold (usually the rims), or in front above head height. When swinging through, the gymnast can also perform a 1/2 turn and get into position for a backwards element.

Arm and hand positioning during the swing through: The arms can be bent when holding the wheel but should be straight and elevated to the side during the change of position. The gymnast must release and re-grasp the wheel with both hands at the same time. The standing swing is usually performed forwards. The backwards variation is often performed in connection with a double standing swing as a change of direction (see below).

The standing swing is a transition element that in terms of biomechanics can be defined as something between the gathering of momentum and a complete decentralised move. In contrast to a complete decentralised move, the centre of body mass only moves slightly away from the middle of the wheel when lifting into a (stride) standing position and remains below or only just above the horizontal middle of the wheel. The impact on momentum is thus relatively limited and is often similar – depending on execution – to a dynamic gathering of momentum in a straight standing position.

Change of direction in straight-line

Centralised change of direction:

This is a change of direction where the gymnast is in a centralised position in the wheel.

a) In an upright position, the change of direction is usually performed in the same way as gathering momentum at the beginning of a routine. Leg and arm positioning are thus subject to the same principles.

In the case of changes of direction without a change of position, the change of rolling direction is achieved only by a transfer of the gymnast's centre of mass, whereby there should be no bending of the legs or releasing of the hands.

b) In an inverted position, the change of direction should be initiated without bending the knees (e.g. by way of a pike).

c) Double standing swing

In the case of this change of direction, the gymnast combines the standing swing described above with a change of direction, i.e. he/she slows down the wheel through a transfer of body mass and use of the arms (the arms are bent and “push” the wheel in the new rolling direction), before leading into a new swing through backwards in the lower phase. The double standing swing can also be performed with a 1/2 turn and is often used in order to get into an upper phase.

Change of direction in the upper phase of decentralised elements:

A change of direction can also take place in the upper phase of decentralised elements. In such cases, the execution of the upper phase element remains the same, but it will be performed earlier so that the centre of body mass remains in the same half of the wheel, thus enabling a change of rolling direction.

In other cases, the gymnast can achieve a change of direction in the upper phase by transferring his/her centre of body mass in the new rolling direction.

In all cases, it is important to respect the general regulations for body positioning and execution. The gymnast is not permitted to use extra leg movements, bent legs, sliding along the wheel rim in a sitting position, or similar adjustments of body positioning in order to achieve the change of direction.

In decentralised changes of direction in the upper phase it is not always clear exactly when the change of direction takes place or should take place. This is highly dependent on the element being performed and is particularly relevant in the case of element combinations in the upper phase.

If a change of direction takes place during an upper phase, the following is true for all elements performed in this phase (including combinations of elements): They will all be counted as being performed in the rolling direction of the wheel, i.e. they will not be recognised as being performed “against the rolling direction”. This is particularly relevant for elements in which the part that is performed in the upper phase often has to be initiated against the rolling direction, while the centralised part is performed in the opposite direction (e.g. “Moves with free knee swing into bridge”).

The spatial limits of transitions

a) In the case of gathering momentum at the beginning of a routine, all position changes in an upright position (not including decentralised elements) and changes of direction in centralised elements, the transition should take place within as short a rolling distance as possible. This means that the position of the preceding element should be held as long as possible and the position of the next element adopted as early as possible.

- In changes of position in an upright position (not including decentralised elements) the transition should take place with the rolling zones represented by the distance between the end of one board area to the end of the second board area (in the direction of the stride rung), or the distance between stride rung and handle rung, or between board and stride rung.

- When gathering momentum at the beginning of a routine, as well as changes of direction (not including decentralised elements), the transition should take place with the rolling zone represented by the distance between the middle point

between board and stride rung and the middle point between the other board and the other stride rung.

- If the change of direction (or gathering of momentum) takes place in a different stride or straddle position (than on the boards), the standing zone of the gymnast will be considered to be the rolling zone for the transition.

b) Element combinations

If elements are combined in an inverted position, the following rolling zones apply:

- In the case of element combinations without any turning of the feet or body, or combinations that include 1/4 und 1/2 turns of the feet and body: The transition must take place between the handle rungs.
- In the case of multiple turns in bindings: The transition must take place between the stride rungs.
- In the case of element combinations with a pike, the pike can be initiated, or must be completed, when the stride rung in the opposite half of the wheel is closest to the floor.
- In the case of element combinations without bindings: The transition begins when the body passes through the horizontal and must be completed when the body is back in the horizontal.

c) Transitions in the upper and lower phase comprise the entire rolling zone necessary to perform the particular decentralised element.

STL A6 Explanation of “Rolling Back” and “Extra Swing”

Rolling back in centralised moves

The definition of rolling back in centralised moves

Rolling back in a centralised move occurs if there is a change of direction before the wheel rotation is complete and the wheel rolls back against the original rolling direction. The term "rolling back" can only be applied to centralised moves.

How to judge rolling back in centralised moves

Difficulty judges:

In this case the move will not be counted in the difficulty score, especially if the core phase of the move is missing (e.g. giant bridge forwards).

Rolling back in a centralised move is not counted as a new length.

Execution judges:

Rolling back in a centralised move incurs a fixed deduction of 0.5. All execution deductions incurred in the unit up to the point of rolling back are deleted and replaced by the half-point deduction. The execution judges start judging again at the beginning of the next move.

If the gymnast rolls back again when attempting the next move, another 0.5 deduction will be made. The gymnast may then make a third attempt to perform a move in the correct rolling direction. If he/she rolls back again, the head judge will stop the routine.

Special cases

Major deduction when rolling back

If the rolling back leads to a fall or physical/verbal assistance from the coach, there will be a fixed deduction of 1.0. All execution deductions that might have occurred in the unit up to the point of the fall are deleted and replaced by the deduction for the fall (1.0).

Extra swing in bindings

An extra swing in bindings occurs in the following cases:

- The gymnast rocks the wheel backwards and forwards more than once to gather momentum at the beginning of a routine.
- The gymnast takes two or more extra swings to gather momentum after a change of direction at the end of a length.

- The gymnast rocks the wheel one or more extra times after the first centralised move in a length in order to gather momentum before continuing with the next move in bindings.

Counting lengths in the case of decentralised moves

General comments

If there is a change of direction in the upper phase whereby a lower phase takes place in the opposite rolling direction, a new length will be counted. This is independent of the type of lower phase performed and means that even if the lower phase contains only half a wheel rotation or less, a new length will be counted, and the difficulty performed will be recognised.

Method of counting

As the lower phase in this case is always performed in a new rolling direction, and it is often unclear exactly when the change of direction in the upper phase takes place, the move as a whole (upper and lower phase) will be counted as part of the new length.

After a change of direction in the upper phase the gymnast usually continues the routine in the new rolling direction, i.e. the gymnast moves on from the lower phase to perform a new upper phase (from which another change of direction may be performed), or he/she continues with a centralised element.

After a change of direction in the upper phase followed by a lower phase in (stride) standing on the boards and/or rungs and/or rims, it is permitted for the gymnast to perform a push through in standing position directly into a dismount (e.g. straight jump), as long as the rolling direction of the lower phase is maintained.

However, it is not permitted to perform a change of direction and standing swing immediately after a lower phase in (stride) standing on the boards and/or rungs and/or rims in order to get into position for a dismount (e.g. straight jump). This will be counted as an extra swing.

Special case before a dismount

In order to perform a straight jump dismount after a push through in standing position, the gymnast is permitted, in the case of a decentralised move, to perform a change of direction and standing swing directly after a lower phase in (stride) standing on the boards and/or rungs and/or rims, provided the previous move was completed in the original rolling direction.

Furthermore, after a centralised move, the gymnast is permitted to perform a double standing swing in order to achieve a straight jump dismount.

Pre-requisites:

- For decentralised moves: The upper phase and subsequent lower phase must be performed in the same rolling direction.
- For centralised moves: A double standing swing in order to achieve the starting position for a push through and straight jump dismount must be initiated in the same direction as the preceding centralised element.

Extra swing in relation to decentralised moves

Definition of an extra swing in relation to decentralised moves

The term “rolling back” is not used in relation to decentralised moves. When referring to decentralised moves, we refer to an “extra swing”. In all other cases, a new length will be counted.

An extra swing in relation to decentralised moves, means the following: The gymnast slows the wheel down after a lower phase, without starting a new upper phase. He/she then performs a single or double extra swing [usually in (stride) stand on the boards/rungs or rims] before continuing the routine in the original or opposite rolling direction.

How to judge an extra swing in relation to decentralised moves

Difficulty judges:

The difficulty judges do not count an extra length.

Execution judges:

An extra swing in relation to decentralised moves (= usually a double swing in standing position) or before the dismount (= usually an additional single swing in standing position) will incur a fixed deduction of 0.5. This deduction is applied independently of the preceding or subsequent move. Judging will continue with the next move or dismount.

Special cases

Multiple extra swings in a standing position

If a gymnast performs not just one, but several swings in a standing position, a maximum deduction of 0.5 will apply.

Deductions for a fall in an extra swing in relation to decentralised moves

If an extra swing in a decentralised move (double swing in standing position) leads to an additional deduction for a fall or physical or verbal assistance from the coach, the execution judges will only make one deduction (1.0).

The difficulty judges will only count a new length if the gymnast resumes the interrupted routine in the opposite rolling direction to the decentralised move in question. As long as the gymnast continues in the original rolling direction, no new length will be counted.

Standing swing

In the case of this transition, we are looking at an element whose main purpose is to give the gymnast enough momentum in order to be able to perform an element in the upper phase.

The gymnast stands on the wheel rims/rung/boards, with hands holding the rims above head level. By lifting the legs (e.g. tucked, angled, stepped...) onto one or two of the rung handles/rungs/boards (usually the boards) in front, the gymnast can transfer momentum to the wheel – as in the lower phase of a decentralised element. After releasing the hands and swinging through, the gymnast can reach behind to hold (usually the rims), or in front above head height. When swinging through the gymnast can also perform a 1/2 turn and get into position to move backwards. For arm and hand positioning during the swing through, see variations of standing position in the lower phase. The standing swing is usually performed forwards. The backwards variation is often performed in connection with a double swing as a change of direction (see below).

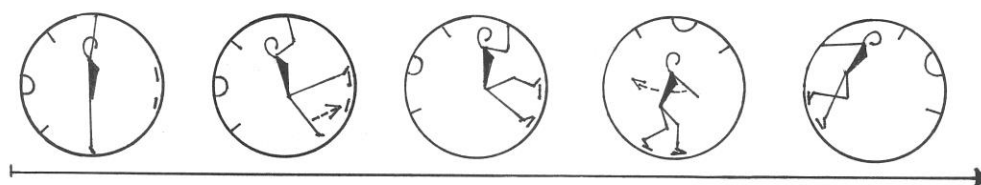


Figure: Standing swing forwards on the boards

The standing swing is a transition element that in terms of biomechanics can be defined between the gathering of momentum and a complete decentralised move. In contrast to a complete decentralised move, the centre of body mass only moves slightly away from the middle of the wheel when lifting into a (stride) standing position and remains below or only just above the horizontal middle of the wheel. The impact on momentum is thus relatively limited and is often similar – depending on execution – to a dynamic gathering of momentum in a straight standing position.

Double standing swing

In this change of direction the gymnast combines the standing swing defined above with a change of direction, i.e. he/she slows the wheel down through a transfer of body mass and by using the arms (the arms are bent) to “press” the wheel into the new rolling direction). This leads into a new swing through backwards in the lower phase. The double standing swing can also be performed with a 1/2 turn and is often used in order to get ready for an upper phase.

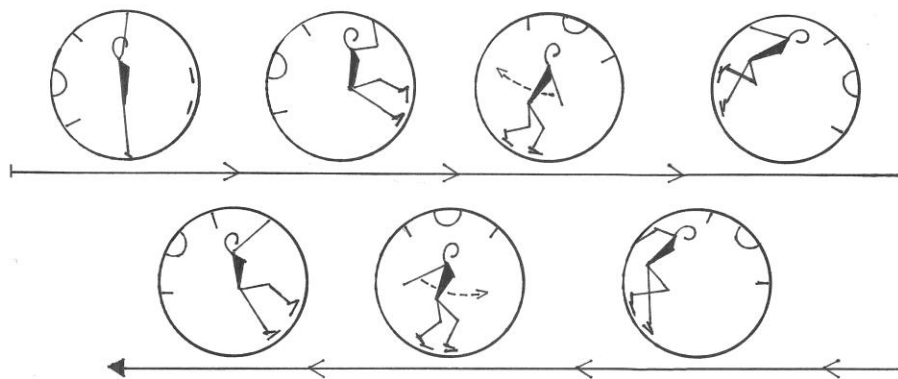


Figure: Double standing swing forwards/backwards on the boards

Comment: Double swings are also possible in other positions (sitting, lying). However, as they do not currently have any meaning in straight-line without music (e.g. to increase momentum), they are primarily used as elements in routines performed to music where they are used as part of a gymnast's musical interpretation.

STL A7 Counting difficulty values in Straight-Line

It is possible that the maximum score for a voluntary routine is limited by a specific number of difficulty elements. In this case, the following principles apply:

1. A higher difficulty value will always fully replace a lower difficulty value.
2. An extra element with lower difficulty will only replace part of the next highest difficulty element.
3. The loss of points in the case of part compensation will be the difference between the two difficulty values.
4. An extra E difficulty will receive maximum D value. An extra D difficulty will receive maximum C value. An extra C difficulty will receive maximum B value. An extra B difficulty will receive maximum A value.
5. In a routine without B, C, D or E difficulty, only A difficulty will be counted, and only as many as the maximum number of difficulty values specified as contributing to the final difficulty score. Any additional A skills will not be counted.
6. Dismounts can also be counted towards the technical score.

SPI A1 Discipline Description: Spiral

The wheel is set in motion on one rim. An approximately circular path is traced by the rim in contact with the floor.

The path traced by the centre of the wheel is also approximately circular. This circular movement of the wheel centre is superimposed by a rotation around the centre of wheel.

The gymnast is inside the wheel and controls its movement through a corresponding transfer of body mass. As in straight-line, it is important that the gymnast moves his/her centre of gravity out of the vertical plane (through the imagined centre of the wheel) in order to accelerate or decelerate.

Acceleration increases the rolling speed of the wheel. The corresponding increase in centrifugal force causes an enlargement of the circular path traced by the wheel and an increase in the angle of inclination.

The angle of inclination is determined by the centre of mass of the whole system (gymnast plus wheel). The connecting line between this centre of mass and the constantly changing point of contact of the wheel with the floor defines the angle of inclination.

As the loss of momentum through frictional forces is greater in spiral than in straight-line, some acceleration is needed in order for the wheel to maintain a regular circular path.

In the “small spiral”, even more force is necessary. By alternately pulling up and pressing down different parts of the wheel, additional momentum is given, which can either keep the frictional deceleration of the wheel under control, or can help to accelerate the wheel in order to bring it back into an upright position.

In the **big spiral**, the diameter of the wheel’s circular path on the floor is bigger than the diameter of the wheel, and the angle of inclination of the system is more than 60°.

In the **small spiral**, the diameter of the wheel’s circular path on the floor is smaller than the diameter of the wheel, and the angle of inclination is less than 30°.

In the **vertical spiral**, the wheel rotates on one rim in an almost upright position. The circular path traced by the wheel rim on the floor is extremely small, while the rotational movement takes place solely around the longitudinal axis through the entire system consisting of gymnast and wheel (i.e. there is no inverted position). The wheel moves at high speed, whereby the gymnast can perform various standing, holding or hanging positions without the second wheel rim touching the floor.

In the small spiral, the diameter of the wheel’s circular path on the floor is smaller than the diameter of the wheel, and the angle of inclination of the wheel to the floor is less than 30°.

SPI A2 Moves and routines in Spiral

The definition of a “move” in spiral

A **move** is a unit of counting defined by a specific spatial and/or time limit, i.e. the start and finish of a gym wheel specific movement within which one or more elements can be performed. In the spiral discipline, these spatial/time limits are fixed.

Moves can be connected together using transitions.

Centralised moves

A **move** in **big spiral** is performed within **two rotations of the wheel**. A difference is made between elements that last for two wheel rotations and moves consisting of element combinations where several elements with changes of position when the gymnast is in an upright and/or inverted position are performed in sequence to make up a move.

It is not permitted to change the tipping direction of the wheel (from in front to behind or vice versa) during a move in the big spiral (with or without element combinations).

A **move** in **small spiral** lasts for **at least 3 seconds**. There are no moves with element combinations in small spiral, i.e. once the gymnast has adopted a particular position in small spiral, this position must be held for at least 3 seconds in order to be recognised.

Decentralised moves

There are only limited opportunities to perform decentralised moves in spiral, and no differentiation is made between an upper and lower phase.

Decentralised moves in big spiral

So far decentralised element/moves in big spiral have generally been variations of an angled or straddle hang, whereby there is little difference between upper and lower phase: The gymnast usually adopts the decentralised position when upright (~ upper phase) and maintains this position when his/her centre of mass is below the horizontal axis through the middle of the wheel (~ lower phase). Decentralised elements can last for two wheel rotations (= decentralised move). There are also moves consisting of element combinations whereby a centralised element and a decentralised element are combined. In this case, the gymnast usually performs one centralised wheel rotation and one decentralised rotation (in optional order).

Decentralised moves in small spiral

Similar to big spiral, the gymnast adopts a decentralised position that is maintained for at least 3 seconds.

Vertical Spiral

In a vertical spiral, the wheel rotates on one rim in an almost upright position. The circular path traced by the wheel rim on the floor is extremely small, while the rotational movement takes place solely around the longitudinal axis through the entire system consisting of gymnast and wheel (i.e. there is no inverted position). The wheel moves at high speed, whereby the gymnast can perform various standing, holding or hanging positions without the second wheel rim touching the floor.

A move in vertical spiral comprises 3 – 5 rotations around the longitudinal axis.

SPI A3 Special transitions/units in Spiral (transitional units)

Transition from big to small spiral

The transition from big to small spiral must take place within a maximum of 3 wheel rotations.

It is not necessary for the wheel to “slide” into the small spiral, but the circular path of a small spiral must be clearly demonstrated!

The holding and standing position of the gymnast must not change within these 3 rotations. It is not permitted to perform the transition as an element combination. E.g. it is not permitted to perform 2 wheel rotations as a side rotation without bindings and 1 wheel rotation as a side rotation without bindings with one foot in front stride position on the lower rim handle (splits).

A transition from big spiral into a centralised small spiral (variation of side front support) must always take place with the holding and standing position of the first move in small spiral. The body may be in a support or hanging position. It is also permitted to combine these two techniques (support and hanging) within the transition.

In a transition from big spiral into low side straddle stand, the gymnast can use the first of maximum 3 wheel rotations in order to change his/her arm and leg positioning (possibly in connection with a change and/or turns) in order to get into a low side straddle stand. The transition into small spiral usually follows immediately after this.

Transition into vertical spiral: side front support with leg circles

The gymnast performs side front support (without bindings) on the upper or lower rim, circling one leg in front (leg remains straight), whereby the speed of the leg circles increases. This will cause an obvious increase in the speed of the wheel. The side front support with leg circles lasts for a maximum of 5 wheel rotations, after which the gymnast brings the wheel into a vertical spiral. At the end of the transitional unit, the gymnast uses an arm pull and transfer of body mass to achieve an almost upright position, where the wheel rotation is solely around the longitudinal axis.

[NB: This unit is a transitional unit similar to the transition from big to small spiral. It does not have a difficulty value of its own, but execution deductions may be made.]

Transition from small spiral to standing

The transition from small spiral to standing must take place within a maximum of 3 wheel rotations.

In the case of **centralised moves without variations of a stride position**, the gymnast maintains the position of the last move in small spiral until the wheel is standing on both rims and the gymnast is the right way up.

In the case of **centralised moves in a stride position to the side, crossed or in front (splits)** the free foot must be brought back into a basic standing position **either** at the end of the last move (= start of the transition from small spiral to standing) **or** in the final rotation of the transition into standing.

Basic standing position means:

- In one binding: the free foot is on the other board
- Without bindings: the free foot is brought back and placed next to the other foot with legs together on the wheel rim

The gymnast can perform the transition from small spiral to standing maintaining a support position throughout, or he/she can use a hanging technique in the final rotation before standing, or he/she can use a combination of these two techniques.

During the transition from small spiral to standing, the angle of inclination to the floor will increase continuously, whereby the wheel should maintain the circular path of a small spiral. The gymnast should avoid ending up in a big spiral.

In the case of a **transition from a decentralised small spiral in low side (straddle) stand to standing** the gymnast remains in this position until the wheel is in a stable standing position. Only then does the gymnast stand up to prepare for the dismount.

If the gymnast performs a **one-armed move in the last small spiral** (centralised or decentralised) he/she is permitted to hold the wheel with the free hand for the transition into standing.

Transition from big spiral to standing

In this case, the transition into standing takes place in the second rotation of the final move. The wheel is slowed down by a transfer of body mass during the second rotation of the final move, after which it is brought into a standing position on both rims with the gymnast in an upright position. It is permitted for the gymnast to stop the momentum of the wheel by moving his/her body mass against the rolling direction and releasing the hand in the rolling direction (similar to a change of direction in straight-line). The released

hand then re-grasps in the original holding position as the wheel reaches standing position on both rims. The gymnast prepares for the dismount from this position.

Transition from vertical spiral to standing

The transition from vertical spiral to standing takes place via a transfer of body mass, whereby the gymnast immediately achieves a standing position on both rims, but where the speed of the wheel will cause it to continue rotating a few times in standing position. In the case of moves in vertical spiral where the gymnast has his/her feet on the wheel, the gymnast stays in the position of the final move until the wheel reaches a standstill. In the case of moves in vertical spiral without the feet on the wheel, the gymnast places his/her feet on the wheel with legs together before bringing the wheel to a standstill.

NB: This unit is a transitional unit similar to the transition from small spiral to standing. It does not have a difficulty value of its own, but execution deductions may be made.

Transition from small to big spiral

This unit is no longer usual in modern gym wheel routines. However, the following rules apply for body positioning and execution:

The transition from small to big spiral must take place within a maximum of 5 wheel rotations. Obvious moving of the hips from side to side should be avoided.

In contrast to the unintentional transition from small to big spiral when attempting to perform a small spiral to standing, the gymnast must perform a move in big spiral at the end of this transition, whereby the gymnast's body position should be significantly different from that of the transition itself.

Transition from vertical to small spiral

Through a transfer of body mass, the gymnast can bring the wheel from a vertical spiral into a small spiral without a new transition from big to small spiral. The gymnast is permitted to use 2-3 wheel rotations in order to achieve the correct angle of inclination for the small spiral.

SPI A4 Rolling zones

Tipping the wheel to start the routine

Tipping the wheel at the start of the routine can be performed in various positions; holding with both hands, one-armed, or without hands (free). The gymnast must be in position for the first element of the routine before the stride rung in rolling direction is closest to the floor.

Tipping the wheel during the routine

Tipping the wheel from one rim to the other during the routine must take place in the area around the boards (= up to 10 cm from each board in the direction of the stride rung).

If the tip takes place in a side or front stride position, the tipping zone is extended in the direction of the stride leg to a point half way between the standing leg and the stride leg.

Position changes and turns in an upright or inverted position in big spiral

The rolling zones for transitions from one element to another in big spiral are as follows:

- For position changes in an upright position: from stride rung to stride rung
- For position changes in an inverted position: from rung handle to rung handle

Position changes in small spiral

The gymnast is permitted to use one wheel rotation in order to change position from one small spiral to the next.

Changes (of direction)

Changes (of direction) include: change, change with tip behind und tip change The following transition (rolling) zones apply:

- With and without bindings: The transition must be completed between the board rung in the original rolling direction and the point on the wheel rim in contact with the floor half way between the board rung and stride rung in the original rolling direction.
- With one leg in stride position: The rolling zone is extended by an equivalent distance beyond the standing position of the stride leg.

SPI A5 Tipping direction of the wheel in Spiral

The tipping direction of the wheel in spiral can be described as “**in front**” or “**behind**”. In the case of moves consisting of element combinations it is only necessary to use “in front” or “behind” for the first element in the combination (as it is not permitted to change the tipping direction of the wheel within an element combination).

“in front”

- When performing a spiral in side position **in front**, the gymnast’s toes (when upright) are closer to the floor than the heels. This is valid for moves both with and without bindings.
- This definition is also valid for all moves in a straight position in bindings.

“behind”

- When performing a spiral in side position **behind**, the gymnast’s heels (when upright) are closer to the floor than the toes. This is valid for moves in bindings. For moves without bindings, the sole of the foot is facing the floor (e.g. side bridge behind).
- This definition is also valid for all moves performed in a straight position in bindings. In the case of a move in straight position behind (e.g. *Spindle rotation behind*) the gymnast’s chest is closer to the floor.

Moves without bindings in straight position

For moves without bindings performed in straight position, there is no difference between “in front” and “behind”.

Decentralised elements

For decentralised moves in the big spiral (= in most cases variations of angled stand and straddle stand) the following applies:

- - If the gymnast is performing in front, the back of the legs are facing the floor.
- - If the gymnast is performing behind, the front of the legs are facing the floor.

SPI A6 Counting difficulty values in Spiral

It is possible that the maximum score for a voluntary routine is limited by a specific number of difficulty elements. In this case, the following principles apply:

1. A higher difficulty value will always replace a lower difficulty value.
2. An extra element with lower difficulty will only replace part of the next highest difficulty element.
3. The loss of points in the case of part compensation will be the difference between the two difficulty values.
4. An extra E element will receive maximum D value. An extra D element will receive maximum C value. An extra C element will receive maximum B value. An extra B element will receive maximum A value.
5. In a routine without B, C, D or E difficulty, only A elements will be counted, and only as many as the maximum number of difficulty elements specified as contributing to the final difficulty score. Any additional A elements will not be counted.