# Blades on Ice



Gary Cahn Instructor

### Course Outline

- 1. Introduction
- 2. Identifying jumps
  - a. Edge jumps
    - i. Axel
    - ii. Loop
    - iii. Salchow
  - b. Toe jumps
    - i. Toe loop
    - ii. Flip
    - iii. Lutz
- 3. What can go wrong with jumps
- 4. Jump quiz
- 5. Women to watch at the Olympics and great performances
- 6. Identifying skating elements other than jumps and distinguishing good from poor
  - a. Scratch spins
  - b. Layback spins
  - c. Combination spins
  - d. Moves in the Field (not judged as separate elements)
    - i. Spread eagle, Russian split jump, Ina Bauer, Death Drop & Cantilever
  - e. Spiral (not judged as separate element)
  - f. Straight line, circular or serpentine footwork
  - g. Choreographic sequence
- 7. Men to watch at the Olympics, and great performances
- 8. Scoring (See attachments)
  - a. The old system
    - b. The new system
      - i. Technical Elements and Grade of Execution (GOE) (See handout for scoring)
      - ii. Program component Scores (PCS) (Each item below is scored on a 1-10 scale)
        - 1. Skating skills
        - 2. Transitions
        - 3. Performance/Execution
        - 4. Composition (Choreography)
        - 5. Interpretation
- 9. You be the judge
- 10. Identifying Pairs elements and distinguishing good from poor
  - a. Not an element per se, but two must skate as one
  - b. Throw jumps
  - c. Lifts
  - d. Twist
  - e. Death spiral
  - f. Combination spins
  - g. Side by side jumps
  - h. Straight line, circular, serpentine footwork, or Choreographic sequence
- 11. Pairs to watch at the Olympics and great performances
- 12. Dance teams to watch at the Olympics and great performances
- 13. Closing
- 14. All the websites in this booklet are available at my figure skating page https://tinyurl.com/8xy65hql



# U.S. Olympic Team

Ladies—Mariah Bell, Karen Chen, Alysa Liu Men—Nathan Chen, Vincent Zhou, Jason Brown Pairs—Cain-Gribble & LeDuc, Knierim & Frazier Dance—Chock & Bates, Hubbell & Donohue, Hawayek & Baker

# Skating Web Sites

All of the sites listed below, as well as additional skating sites are at my skating web site <u>https://tinyurl.com/8xy65hql</u>

<u>http://www.fsvids.net/forum/</u> A wonderful archive of videos of skating performances, by virtually every important skater from the past 40 years. Includes Olympics, Worlds, and Nationals.

<u>https://isu.org/figure-skating</u> The International Skating Union, the governing body for the sport which determines the rules. Skater's bios, past results, rules, and much more.

https://www.nbcolympics.com/figure-skating NBC Olympic website containing videos, bios, news and much more about the Olympics

https://olympics.com/en/beijing-2022 The official 2022 Olympic website

https://www.nbcolympics.com/schedule/sport/figure-skating Times for figure skating events.

# Highest Scores Ever Recorded (This helps you evaluate a good score vs. a great score) As of 11/30/2021

Men

Short program: 111.82 Yuzuru Hanyu 2020 Four Continents Free skate: 224.92 Nathan Chen 2019 Grand Prix final Total score: 335.3 Nathan Chen 2019 Grand Prix final

Ladies

Short program: 87.42 Kamila Valieva 2021 Russia Grand Prix Free skate: 185.29 Kamila Valieva 2021 Russia Grand Prix Total score: 272.71 Kamila Valieva 2021 Russia Grand Prix

Pairs Pairs

Short program: 82.34 Aleksandra Boikova / Dmitrii Kozlovskii 2020 Europeans Free skate: 155.6 Sui Wenjing / Han Cong 2019 Worlds Total score: 234.84 Sui Wenjing / Han Cong 2019 Worlds <u>Dance</u> Rhythm dance: 90.03 Gabriella Papadakis / Guillaume Cizeron 2019 NHK Trophy Free dance: 136.58 Gabriella Papadakis / Guillaume Cizeron 2019 NHK Trophy Total score: 226.61 Gabriella Papadakis / Guillaume Cizeron 2019 NHK Trophy

# Gary's Simplified Guide to Identifying Jumps

This page describes jumps for a counter clockwise skater. A clockwise skater would take off and land on the opposite foot from what is listed below.

All jumps are landed backwards on the right foot.

There are 3 edge jumps and 3 toe pick jumps.

Jumps from easiest to hardest are: Toe loop, Salchow, Loop, Flip, Lutz, Axel. However, some skaters find certain jumps particularly hard or particularly easy.

### Edge Jumps

### Axel

Only one jump begins with a forward takeoff, the Axel. The remaining 5 jumps begin with a backwards takeoff. The axel is the most difficult jump. Because it takes off in the forward direction, it always has an extra half revolution compared to all the other jumps, i.e. a triple axel is 3.5 revolutions, whereas the remaining triple jumps are 3 revolutions.

### Loop

The loop is one of 2 jumps that take off on the right foot and land on the right foot. Very roughly 8% of the second jumps are loop jumps.

### Salchow

The Salchow takes off on the left foot. If a skater is suddenly in the air and you haven't noticed him/her take off, it is probably a Salchow. Very roughly 1% of the second jumps are a Salchow.\*

### Toe Pick Jumps

### Toe Loop

The toe loop begins with a left toe pick and takes off on the right foot. It is basically a Loop jump with a toe pick at the start. It is the easiest jump. Very roughly 90% of the second jumps that are part of a 2-jump combination are toe loops.

### Flip

The flip is the opposite of a toe loop. It begins with a right toe pick, and takes off on the left foot. Importantly, it takes off on an <u>inside</u> edge. Very roughly 1% of the second jumps are a Flip.\*

### Lutz

A Lutz is identical to a flip, except it takes off on an <u>outside</u> edge. It is the second most difficult jump. It is the only "counter-rotated" jump because the skater begins it by twisting in one direction but rotating in the opposite direction. This makes it a particularly difficult jump.

\* These always have a Euler (AKA half loop) between the first and second jump.

# Determining the Type of Jump

The descriptions below are for a Counter Clockwise skater Left and Right are reversed for Clockwise skaters

- 1. Did it take off traveling forward or backward?
  - a. If forward, it is an **axel**
  - b. If backward, it is one of the 5 remaining jumps.
- 2. Did it take off from an edge or from a toe pick?
  - a. If from an edge, it must be a loop or a salchow
    - i. Loop takes off from the right foot. Loops (the loop and toeloop) are the only jumps that take off from the same foot they land on
    - ii. Salchow takes off from the left foot
  - b. If from a toe pick, it must be a lutz, flip or toeloop
    - i. If it is a left toe pick, it must be a **toeloop**
    - ii. If it is a right toe pick, it is a flip or a lutz
      - 1. If takeoff is from an outside edge, it is a **lutz**
      - 2. If takeoff is from an inside edge, it is a **flip**

Counter clockwise skaters land all their jumps on their right foot, while clockwise skaters land all their jumps on their left foot, so the landing foot doesn't help you distinguish what type of jump it is. The take-off foot does distinguish a loop from a salchow.

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# Videos of the 6 Jumps

Here are 4 web sites that contain videos explaining and showing the 6 jumps. Each of them takes a different approach.

1. This recording is the longest, but it does the best job of explaining each jump. <u>https://www.youtube.com/watch?v=HkcAmGCkjtA</u> They place labels on the screen to help you identify the jump.

2. In this recording a woman demonstrates the 6 jumps. She also shows them in slow motion, although it is not as slow as it could be. See <u>https://www.youtube.com/watch?v=5LgY0eEsluQ</u>

3. This recording is done in cartoon form. It makes it easier to see what they are talking about, because the motion stops and they label on the screen what to look for. See <a href="https://www.youtube.com/watch?v=0s7PyUIMdC0">https://www.youtube.com/watch?v=0s7PyUIMdC0</a>

4. Here's one more recording that is helpful, because they show the jumps on land, and describe them, before they show them at full speed on the ice. See <u>https://www.youtube.com/watch?v=apLyYIrbRpE</u>

# Scoring – The Old System

For more than 50 years, figure skating was scored on a 6.0 system. This system was replaced during the 2004-2005 season at all ISU events with a new system.

Under the old system, most Olympic eligible (amateur) events had a short program and a long program. Prior to 1991 there was a third program called the Compulsory figures, during which skaters had to trace figures on the ice. This part of the event is what gave figure skating its name. In recent years, in some events (including the Worlds and the Olympics in some years) there has also been a preliminary program. Each program that was skated had two scores assigned to it---a technical score and a presentation score. Many people referred to the latter as the artistic score.

Judges assigned scores on a 6.0 scale. 6 was defined as perfection, and it was very rarely given. All other scores below 6.0 were relative scores. They had no **absolute** meaning. Scores were simply used to rank skaters among themselves, i.e. if there were 10 skaters skating, an individual judge had to rank the skaters from best to worst, 1-10. The judge did this using the 6.0 system

Imagine a simplified program judged by only 3 judges:

### Short Program

	Judge	e 1		Judge	e 2		Judge 3					
	Tech	/Present	t/Total	Tech	/Present	t/Total	Tech/Present/Total					
Skater A	5.8	5.7	11.5	5.8	5.8	11.6	5.6	5.6	11.2			
Skater B	5.7	5.8	11.5	5.8	5.7	11.5	5.7	5.6	11.3			
Skater C	5.6	5.6	11.2	5.7	5.7	11.4	5.5	5.5	11.0			

Judge 1 gave the same total score to both skater A and B. Because this is the short program, the technical score breaks the tie. In the long program, the Presentation score breaks the tie. Thus judge 1 has ranked the skaters A-first, B-second, and C third. Judge 2 has ranked them the same way. Judge 3 has ranked them B, A, C. Because a majority of judges has ranked skater A in first place, this skater is the winner of the Short program. Skaters B and C would be the 2<sup>nd</sup> and 3<sup>rd</sup> place winners.

The short program counted for 1/3 of the total score. The long program counted for 2/3 of the score.

# Scoring – The New System

The new scoring system continues to have both a short and a long program. (In Dance the short program is called the Rhythm Dance.) Each program is assigned two scores, a Technical Score and a Program Components Score (PCS), which is akin to the Presentation score (AKA Artistic Impression) from the old system. However, this is where the similarity between the old and new systems ends.

9 judges will be scoring the Olympic events. The high and low scores will be dropped and the 7 remaining judges' scores will probably be the only ones included in the final score. Note: During the 2018 Olympics, a computer randomly dropped 2 additional judges, so in the end, the scores of only 5 judges counted.

### The Technical score:

The skater(s) is awarded a certain number of points for each individual element that he/she/they attempt. These points are referred to as the Base Value for that particular element. (See pages 13-16) The more difficult the element, the higher the base value for that element. Thus, a triple axel has a Base Value of 8 points, whereas a double axel has a Base Value of 3.3 points. Spins and Step Sequences are also assigned Base Values as well. Once a skater does an element, such as a triple axel, a person known as the technical specialist announces what element was performed, and each judge grades the element from –5 to +5. These grades from the judges are called a Grade of Execution (GOE). A plus grade is used for an element that is done exceptionally well. 0 indicates an average element, and a minus grade indicates an element done poorly. (See additional notes about GOE below)

The high and low judges' scores are thrown out, and the remaining judges GOE scores are averaged for each element. For example if there are 9 judges, each of these judges assigns a GOE score to the triple axel that they saw. After throwing out the high and low GOE, the computer averages the remaining GOE scores, and the skater receives that number of **additional** points for that particular element. For example, if the skater does a triple axel (Base value =8 points) and she receives an average GOE of 2 from all the judges, her total score for the triple axel is 8 + 1.6 = 9.6 points. (See the next paragraph for why the GOE score is 1.6 rather than 2.) All of the remaining elements in the skater's program are graded in a similar fashion by the judges. These technical element scores are added together to produce a total technical element score.

Positive GOE scores vary from 1-5, which mean that the skater receives 10% - 50% added to her Base Value score. Negative GOE scores of -1 through -5 are issued for poorly performed elements. These result in the skater's Base Value being reduced by 10 - 50%. The GOE of -5 to 5 that is assigned by the judge is translated into a specific number of points, which vary for each element. For example a 5 GOE for a triple lutz adds an additional 2.95 points to the Base Value score, whereas a 5 for a double lutz adds an additional 1.05 points. This keeps GOE marks proportional to the base value of jump, because the base value for a triple lutz is 5.9 and the base value of a double lutz is 2.1

During the short program, the last jump performed in the second half of the program receives a 10% bonus, and in the long program, the last three jumps that occur in the second half of the program also are given a 10% bonus. A skater who falls during their skate receives a 1 point deduction for each of their first two falls. This is subtracted from his/her total score. Additional falls result in 2 point deductions. Skaters can receive other deductions similar to the deduction for falling such as a deduction for skating too long, or having an improper costume.

Skaters also receive deductions for:

- 1. Under-rotated jumps ( $\frac{1}{4} \frac{1}{2}$  turn short of full rotation
- 2. Downgraded jumps (more than <sup>1</sup>/<sub>2</sub> turn short of full rotation)
- 3. Jumps that take off on the wrong edge or an unclear edge

In addition a jump that is up to <sup>1</sup>/<sub>4</sub> turn short of full rotation, will receive a lower PCS score, but there will be no deduction from the base value. High-speed cameras are used to determine all of these errors.

### <u>The Program Components Score: (PCS)</u> (See Next Page Too)

There are 5 parts to the PCS. They are: Skating Skills, Transitions, Performance/Execution, Composition (AKA Choreography), and Interpretation. Each of these is described in enormous detail in the rulebook. Each judge grades the skater's overall program on a 1-10 scale for each of these 5 components.

The 5 PCS areas are briefly defined as follows: (Longer definitions are used by the judges)

- 1. Skating Skills: Overall skating quality: edge control and flow over the ice surface demonstrated by a command of the skating vocabulary (edges, steps, turns etc.), the clarity of technique and the use of effortless power to accelerate and vary speed.
- 2. Transitions/Linking Footwork & Movement\*: The varied and or intricate footwork, positions, movements and holds that link all elements. This also includes the entrances and exits of technical elements. (\*not used in the Rhythm dance)
- 3. Performance/Execution: Performance is the involvement of the skater/couple/teams physically, emotionally and intellectually as they translate the intent of the music and choreography. Execution is the quality of movement and precision in delivery. This includes harmony of movement in pair skating.
- 4. Composition\* (AKA Choreography): An intentional, developed and/or original arrangement of all types of movements according to the principals of proportion, unity, space, pattern, structure and phrasing. (\*not used in rhythm dance)
- 5. Interpretation: The personal and creative translation of the music to movement on ice.

The technical score and the PCS score are added together for the short program, and that single score is carried over and added to the long program technical element score plus the PCS score.

The total number of technical points a skater can earn during the short and long programs is dramatically different. For example, men and women may perform only 7 elements in the short program, but 12 in the long program. In addition, the "typical" technical score varies for men and women, as well as pairs and dance. The ISU believes that the PCS score should be very roughly equal to the technical score for each of the 4 disciplines. To accomplish this goal, the PCS score is weighted between .8 and 2.0, depending on which of the 4 disciplines you are considering, and depending on whether it is men or women. This weighting factor is multiplied by the total PCS score that the skater earns, e.g. in the men's long program, the weighting factor is 2.0. Therefore, if a man earns a total PCS score of 40, the PCS is reported as 80. The weighting scores for the short and long men are: 1.0 & 2.0, women and pairs .8 & 1.6, dance .8 & 1.2

Very Poor 1	Poor 2	Weak 3	Fair 4	Average 5	Above Average 6	Good 7	Very Good 8	Outstanding 9	Outstanding 10	Use	Use	Var	Flo	Bal	Use	De sur (ed tec	2016 Revised 28 Aug
										e of one foot skating	e of multi directional skating	ied use of power, speed and eleration	w and glide	ance, rhythmic knee action and cision of foot placement	e of deep edges, steps and turns	SKATING SKILLS fined by overall cleanness and eness, edge control and flow over ice surface demonstrated by a mmand of the skating vocabulary ges, steps, turns etc.), the clarity of hnique and the use of effortless wer to accelerate and vary speed.	rogram (
												Quality	Difficulty	Variety (including variety of holds in ID)	Continuity of movements from one element to another	TRANSITIONS The varied and purposeful use of intricate footwork, positions, movements and holds that link all elements.	Componei
Red, 0,25-2,75		Oranige, 5,00-4,75	000000 0 000 4 75		Green 5 00-6 75		Golden 7.00-8.75	Ulamona, 9,00-10,00		Spatial awareness between partners (PS, ID)	Unison and "oneness" (PS, ID)	Individuality / personality	Variety and contrast of movements and energy	Carriage & Clarity of movement	Physical, emotional, intellectual involvement and projection	PERFORMANCE Involvement of the Skater/Pair/Couple physically, emotionally and intellectually as they deliver the intent of the music and composition.	nts - Single
											Originality of the composition	Phrase and form (movements & parts of the program to match the musical phrasing)	Multidimensional use of space and design of movements	Pattern / ice coverage	Purpose (idea, concept, vision, mood)	COMPOSITION An intentionally developed and/or original arrangement of all types of movements according to the principles of musical phrase, space, pattern, and structure.	es&Pairs, I
										balance between skating to the beat and melody in the Free Dance (ID)	Skating primarily to the rhythmic beat for Short Dance and keeping a good	Relationship between the skaters reflecting the character and rhythm of the music (PS, ID)	Use of finesse to reflect the details and nuances of the music	Expression of the music's character/feeling and rhythm, when clearly identifiable	Movement and steps in time to the music (Timing)	INTERPRETATION The personal, creative, and genuine translation of the rhythm, character and content of music to movement on ice.	ce Dance

### Grade of Execution - Positive Aspects

Chart for negative aspects is on next page (Similar charts for Dance)

### II. Updated Guidelines for marking +GOE of Single/Pair Elements (positive aspects)

These guidelines are tools to be used together with the minus GOE charts. The final GOE of a performed element is based on the combination of both positive and negative aspects. It is important that the final GOE of an element reflects the positive aspects, as well as any possible reductions that may apply. The final GOE of an element is calculated considering first the positive aspects of the element that result in

a starting GOE for the evaluation. Following that a Judge reduces the GOE according to the guidelines of possible errors and the result is the final GOE of the element.

To establish the starting GOE Judges must take into consideration the bullets for each element. General recommendations are as follows:

FOR + 1: 1 bullet	FOR + 2 : 2 bullets	FOR + 3: 3 bullets
FOR + 4 : 4 bullets	FOR + 5: 5 or more bullets	

FOR + 4 and +5 THE FIRST THREE bullets highlighted in bold must be present

### Singles

Jump Elements	<ol> <li>very good height and very good length (of all jumps in a combo or sequence)</li> <li>good take-off and landing</li> <li>effortless throughout (including rhythm in Jump combination)</li> <li>steps before the jump, unexpected or creative entry</li> <li>very good body position from take-off to landing</li> <li>element matches the music</li> </ol>
Spins	<ol> <li>good speed and/or acceleration during spin</li> <li>good controlled, clear position(s) (inc. height and air/landing position in flying spin)</li> <li>effortless throughout</li> <li>maintaining a centered spin</li> <li>creativity and/or originality</li> <li>element matches the music</li> </ol>
Step Sequences	1) deep edges, clean steps and turns 2) element matches the music
	<ul><li>a) effortless throughout with good energy, flow and execution</li><li>a) creativity and/or originality</li></ul>
	<ul><li>5) excellent commitment and control of the whole body</li><li>6) good acceleration and deceleration</li></ul>
Choreographic Sequences	<ol> <li>1) creativity and/or originality</li> <li>2) element matches the music and reflects the concept/character of the program</li> <li>3) effortless throughout with good energy, flow and execution</li> <li>4) good ice coverage or interesting pattern</li> <li>5) good clarity and precision</li> <li>6) excellent commitment and control of the whole body</li> </ol>

REDUCTIONS FOR ERRORS											
JUMP ELEMENTS											
SP: Jump element not according to requirements final GOE must be	GOE -5	Downgraded (sign << )	-3 to -4								
Fall	-5	Under-rotated (sign < )	<u>-2 to -3</u>								
Landing on two feet in a jump	-3 to -4	Landed on the quarter (sign q)	<u>-2</u>								
		Less than quarter missing (no sign)	<u>-1</u>								
Stepping out of landing in a jump	-3 to -4	Euler executed as step over	-1 to -2								
2 three turns in between (jump combo)	-2 to -3	Poor speed, height, distance, or air position	-1 to -3								
Wrong edge take off F/Lz (sign "e")	<u>-2 to -4</u>	Touch down with both hands in a jump	-2 to -3								
Unclear edge take off F/Lz (sign "!")	<u>-1 to -2</u>	Touch down with one hand or free foot	-1 to -2								
Unclear edge take off F/Lz (no sign)	-1	Loss of flow/direction/rhythm between	<u>-1 to -3</u>								
		jumps (combo/seq.)									
Poor take-off	<u>-1 to -3</u>	Weak landing (bad pos./wrong	-1 to -3								
		edge/scratching etc)									
		Long preparation	-1 to -3								

# Scale of Values Jumps are 1 - 4A (Some spins are on succeeding pages) This is just 4 of 8 pages of SOV for Singles and Pairs Similar document for Dance

		-5	-4	-3	-2	-1	BASE	+1	+2	+3	+4	+5
		-50%	-40%	-30%	-20%	-10%		+10%	+20%	+30%	+40%	+50%
					Single a	and Pair	Skating					
	Jumps											
	1T	-0.20	-0.16	-0.12	-0.08	-0.04	0.40	+0.04	+0.08	+0.12	+0.16	+0.20
	1S	-0.20	-0.16	-0.12	-0.08	-0.04	0.40	+0.04	+0.08	+0.12	+0.16	+0.20
1	1Lo	-0.25	-0.20	-0.15	-0.10	-0.05	0.50	+0.05	+0.10	+0.15	+0.20	+0.25
1	1Eu (Euler)	-0.25	-0.20	-0.15	-0.10	-0.05	0.50	+0.05	+0.10	+0.15	+0.20	+0.25
	1F	-0.25	-0.20	-0.15	-0.10	-0.05	0.50	+0.05	+0.10	+0.15	+0.20	+0.25
	1Lz	-0.30	-0.24	-0.18	-0.12	-0.06	0.60	+0.06	+0.12	+0.18	+0.24	+0.30
	47.4	0.46	0.12	0.10	0.06	0.02	0.22	10.02	10.00	10.10	.0.12	10.46
	484	-0.10	-0.13	-0.10	-0.00	-0.03	0.32	+0.03	+0.06	+0.10	+0.13	+0.10
1Δ	1104	-0.10	0.10	-0.10	-0.00	-0.03	0.32	+0.03	+0.00	+0.10	+0.15	+0.10
111	1 <u>L0&lt;</u>	-0.20	-0.10	-0.12	-0.00	-0.04	0.40	+0.04	+0.00	+0.12	+0.16	+0.20
		-0.20	0.10	0.14	-0.00	-0.04	0.40	+0.04	+0.00	+0.12	+0.10	+0.20
		0.15	0.13	-0.14	-0.10	-0.05	0.40	+0.03	+0.10	+0.00	+0.19	+0.24
	11 T < and a	-0.15	-0.12	-0.09	-0.00	-0.03	0.30	+0.03	+0.00	+0.09	+0.12	+0.15
	IL2 < and e	-0.10	-0.14	-0.11	-0.07	-0.04	0.50	+0.04	+0.07	±0.11	±0.14	Ŧ0.10
	1A	-0.55	-0.44	-0.33	-0.22	-0.11	1.10	+0.11	+0.22	+0.33	+0.44	+0.55
	2T	-0.65	-0.52	-0.39	-0.26	-0.13	1.30	+0.13	+0.26	+0.39	+0.52	+0.65
	2S	-0.65	-0.52	-0.39	-0.26	-0.13	1.30	+0.13	+0.26	+0.39	+0.52	+0.65
2	2Lo	-0.85	-0.68	-0.51	-0.34	-0.17	1.70	+0.17	+0.34	+0.51	+0.68	+0.85
<u> </u>	2F	-0.90	-0.72	-0.54	-0.36	-0.18	1.80	+0.18	+0.36	+0.54	+0.72	+0.90
	2Lz	-1.05	-0.84	-0.63	-0.42	-0.21	2.10	+0.21	+0.42	+0.63	+0.84	+1.05
	<u>1A&lt;</u>	<u>-0.44</u>	<u>-0.35</u>	<u>-0.26</u>	<u>-0.18</u>	<u>-0.09</u>	0.88	+0.09	<u>+0.18</u>	+0.26	+0.35	+0.44
	<u>2T&lt;</u>	<u>-0.52</u>	<u>-0.42</u>	<u>-0.31</u>	<u>-0.21</u>	<u>-0.10</u>	<u>1.04</u>	<u>+0.10</u>	+0.21	<u>+0.31</u>	+0.42	+0.52
	<u>2S&lt;</u>	<u>-0.52</u>	<u>-0.42</u>	<u>-0.31</u>	<u>-0.21</u>	<u>-0.10</u>	<u>1.04</u>	<u>+0.10</u>	+0.21	<u>+0.31</u>	+0.42	+0.52
•	<u>2Lo&lt;</u>	<u>-0.68</u>	<u>-0.54</u>	<u>-0.41</u>	<u>-0.27</u>	<u>-0.14</u>	<u>1.36</u>	<u>+0.14</u>	+0.27	<u>+0.41</u>	+0.54	+0.68
2A	<u>2F &lt; or e</u>	<u>-0,72</u>	<u>-0.58</u>	<u>-0.43</u>	<u>-0.29</u>	<u>-0.14</u>	<u>1.44</u>	<u>+0.14</u>	+0.29	<u>+0.43</u>	+0.58	+0.72
	<u>2Lz &lt; or e</u>	<u>-0.84</u>	<u>-0.67</u>	<u>-0.50</u>	<u>-0.34</u>	<u>-0.17</u>	<u>1.68</u>	<u>+0.17</u>	+0.34	<u>+0,50</u>	+0.67	<u>+0.84</u>
	2F < and e	-0.54	-0.43	-0.32	-0.22	-0.11	1.08	+0.11	+0.22	+0.32	+0.43	+0.54
	2Lz < and e	-0.63	-0.50	-0.38	-0.25	-0.13	1.26	+0.13	+0.25	+0.38	+0.50	+0.63
	24	1.65	1 3 2	0.00	0.66	0.33	3 30	+0.33	+0.66	+0.00	+1.32	+1.65
	24	-1.05	-1.32	-0.99	-0.00	-0.33	3.30	+0.33	+0.00	+1.35	+1.52	+2.10
	30	-2.10	-1.00	1.20	-0.04	-0.42	4.20	+0.42	+0.04	+1.20	+1.00	+2.10
2	30	-2.15	1.06	1.23	-0.00	-0.43	4.00	+0.43	+0.00	+1.23	+1.06	+2.15
3	3E	2.45	2.12	1.50	-0.30	-0.43	5.30	+0.43	+1.06	+1.47	+2.12	+2.45
	317	2.05	2.12	-1.33	-1.00	-0.55	5.00	+0.55	+1.00	+1.33	+2.12	+2.05
	562	-2.33	-2.00	-1.11	-1.10	-0.55	5.50	10.33	¥1.10	<b>+</b> 1.11	+2.00	+2.33
	2A<	-1.32	-1.06	-0.79	-0.53	-0.26	2.64	+0.26	+0.53	+0.79	+1.06	+1.32
	3T<	-1.68	-1.34	-1.01	-0.67	-0.34	3.36	+0.34	+0.67	+1.01	+1.34	+1.68
	3S<	-1.72	-1.38	-1.03	-0.69	-0.34	3.44	+0.34	+0.69	+1.03	+1.38	+1.72
	3Lo<	-1.96	-1.57	-1.18	-0.78	-0.39	3.92	+0.39	+0.78	+1.18	+1.57	+1.96
2 4	3F< or e	-2.12	-1.70	-1.27	-0.85	-0.42	4.24	+0.42	+0.85	+1.27	+1.70	+2.12
ЗA	3Lz< or e	-2.36	-1.89	-1.42	-0.94	-0.47	4.72	+0.47	+0.94	+1.42	+1.89	+2.36
	3F < and e	-1.59	-1.27	-0.95	-0.64	-0.32	3.18	+0.32	+0.64	+0.95	+1.27	+1.59
	3Lz < and e	-1.77	-1.42	-1.06	-0.71	-0.35	3.54	+0.35	+0.71	+1.06	+1.42	+1.77
	3A	-4.00	-3.20	-2.40	-1.60	-0.80	8.00	+0.80	+1.60	+2.40	+3.20	+4.00
	4T	-4.75	-3.80	-2.85	-1.90	-0.95	9.50	+0.95	+1.90	+2.85	+3.80	+4.75
	4S	-4.85	-3.88	-2.91	-1.94	-0.97	9.70	+0.97	+1.94	+2.91	+3.88	+4.85
1	4Lo	-5.25	-4.20	-3.15	-2.10	-1.05	10.50	+1.05	+2.10	+3.15	+4.20	+5.25
4	4F	-5.50	-4.40	-3.30	-2.20	-1.10	11.00	+1.10	+2.20	+3.30	+4.40	+5.50
	4Lz	-5.75	-4.60	-3.45	-2.30	-1.15	11.50	+1.15	+2.30	+3.45	+4.60	+5.75
	4A	-6.25	-5.00	-3.75	-2.50	-1.25	12.50	+1.25	+2.50	+3.75	+5.00	+6.25

#### I. Updated Scale of Value (SOV)

50%         40%         20%         40%         10%         10%         10%         40%         40%         40%         40%         40%         40%         40%         40%         40%         40%         41%         41%         41%         41%         41%         41%         41%         41%         41%         42%         43%         44%         43%         43%         44%         43%         43%         44%         43%         43%         44%         43%         43%         44%         43%         43%         44%         43%         43% <th></th> <th>-5</th> <th>-4</th> <th>-3</th> <th>-2</th> <th>-1</th> <th>BASE</th> <th>+1</th> <th>+2</th> <th>+3</th> <th>+4</th> <th>+5</th>		-5	-4	-3	-2	-1	BASE	+1	+2	+3	+4	+5
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		-50%	40%	30%	20%	-10%	DAGE	+10%	+20%	+30%	+40%	+50%
bit         c c c c c c c c c c c c c c c c c c c	24 -	-3076	-40 /0	-30 /6	-20 /0	-1076	6.40	+1076	+2070	+30%	140 /0	+30 %
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	<u>3A&lt;</u>	- <u>3.20</u>	-2.56	-1.92	<u>-1.28</u>	- <u>U.64</u>	<u>6.40</u>	+0.64	+1.28	+1.92	+2.56	+3.20
dsc         -3.88         -3.10         -2.33         -1.85         -0.78         1.02         +2.33         +2.33         +3.25         +4.20           df < ore         -4.40         -3.52         -2.64         -1.76         -0.88         8.80         +0.88         +1.25         +2.33         +4.20           df < ore         -4.40         -3.52         -2.64         -1.76         -0.28         8.80         +0.88         +1.76         +2.25         +3.36         +4.20           df < c and         -3.30         -2.64         -1.84         -0.92         -0.66         6.90         +0.66         +1.32         +1.98         +2.24         +3.36           df z < and         -3.30         -2.64         -1.33         -0.66         6.90         +0.66         +3.32         +1.98         +2.24         +3.35           gp in none position and no change of foct         (upright, layback, camel or sit)         USp1         -0.30         +0.40         +0.50           USp1         -0.68         -0.48         -0.24         -0.21         -0.21         +0.20         +0.30         +0.44         +0.60           USp1         -0.60         -0.45         -0.33         -0.15         +0.30         +0.5	<u>41&lt;</u>	<u>-3.80</u>	<u>-3.04</u>	-2.28	<u>-1.52</u>	<u>-0.76</u>	<u>7.60</u>	+0.76	+1.52	+2.28	+3.04	+3.80
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	<u>4S&lt;</u>	<u>-3.88</u>	<u>-3.10</u>	<u>-2.33</u>	<u>-1.55</u>	<u>-0.78</u>	<u>7.76</u>	+0.78	+1.55	+2.33	<u>+3.10</u>	+3.88
df < ore         4.40         3.52         2.264         1.16         -0.288         8.80         +0.08         +1.16         +2.264         +3.32         +4.40           4f < cande	<u>4Lo&lt;</u>	<u>-4.20</u>	<u>-3.36</u>	<u>-2.52</u>	<u>-1.68</u>	<u>-0.84</u>	<u>8.40</u>	+0.84	<u>+1.68</u>	+2.52	+3.36	+4.20
$ \begin{array}{c} \frac{412 < \text{ore}}{415 < \text{ord}} = \frac{4.80}{3.00} - \frac{3.88}{2.76} - \frac{3.28}{1.32} - \frac{3.02}{2.00} - \frac{9.20}{2.00} + \frac{9.20}{1.00} + \frac{9.27}{1.38} + \frac{9.27}{1.28} + \frac{3.28}{2.26} + \frac{3.30}{3.00} \\ \frac{412 < \text{and}}{4.8 < 5.00} - \frac{4.00}{3.00} - \frac{3.00}{2.00} - \frac{2.00}{1.00} + \frac{1.00}{1.00} + \frac{1.00}{1.00} + \frac{1.00}{2.00} + \frac{3.00}{3.00} + \frac{2.27}{2.00} + \frac{3.38}{3.00} + \frac{3.26}{3.00} + \frac{3.26}{$	<u>4F &lt; or e</u>	<u>-4.40</u>	<u>-3.52</u>	<u>-2.64</u>	<u>-1.76</u>	<u>-0.88</u>	<u>8.80</u>	+0.88	<u>+1.76</u>	+2.64	+3.52	<u>+4.40</u>
4f < and e	<u>4Lz &lt; or e</u>	<u>-4.60</u>	<u>-3.68</u>	<u>-2.76</u>	<u>-1.84</u>	<u>-0.92</u>	<u>9.20</u>	<u>+0.92</u>	<u>+1.84</u>	<u>+2.76</u>	<u>+3.68</u>	<u>+4.60</u>
4L2 < and e         3.45         -2.76         -2.07         -1.38         -0.08         e.90         +0.09         +1.38         +2.00         +2.00         +3.00         +2.00         +3.00         +2.00         +3.00         +2.00         +3.00         +2.00         +3.00         +2.00         +3.00         +4.00         +5.00           Spin (50 Spins for Pairs)         Spin (0 to Spins for Pairs)         -0.03         +0.40         +0.10         +0.20         +0.38         +0.44         +0.40         +0.01         +0.20         +0.38         +0.44         +0.40         +0.50           USp1         -0.60         -0.48         -0.38         -0.15         1.50         +0.15         +0.38         +0.67         +0.76         +0.95           USp4         -1.20         -0.66         -0.77         -0.48         -0.24         +0.12         +0.24         +0.36         +0.60         +0.76         +0.95           USp4         -1.20         -0.60         -0.48         +0.24         +0.16         +0.38         +0.61         +0.38         +0.61         +0.38         +0.48         +0.72         +0.96         +1.20           USp4         -0.35         -0.38         -0.12         1.20         +0	4F < and e	-3.30	-2.64	-1.98	-1.32	-0.66	6.60	+0.66	+1.32	+1.98	+2.64	+3.30
4Ac         5.00         -4.00         -3.00         -2.00         +1.00         +2.00         +3.00         +4.00         +5.00           Spin Io ne position and no change of foot (upright, layback, camel or sit)         USp8         -0.50         -0.40         -0.30         -0.20         -0.10         1.00         +0.10         +0.20         +0.38         +0.44         +0.55           USp8         -0.50         -0.45         -0.30         -0.15         1.50         +0.15         +0.33         +0.46         +0.67         +0.76         +0.76         +0.88         +0.67         +0.76         +0.98         +1.20         +0.30         +0.48         +0.77         +0.60         +0.45         +0.30         +0.12         +0.24         +0.48         +0.77         +0.60         +1.20         +0.24         +0.48         +0.77         +0.60         +1.20         +0.24         +0.48         +0.60         +1.20         +0.24         +0.48         +0.60         +0.55         +1.20         +0.72         +0.96         +1.20         +0.24         +0.48         +0.60         +0.55         +1.20         +0.35         +0.27         +0.36         +0.14         +0.24         +0.46         +0.27         +0.96         +1.35         +0.55	4Lz < and e	-3.45	-2.76	-2.07	-1.38	-0.69	6.90	+0.69	+1.38	+2.07	+2.76	+3.45
Spins (Solo Spins for Pairs)           Spin in one position and no change of foot (upright, layback, camel or sit)           USp8         -0.50         -0.40         -0.30         -0.20         -0.10         +0.01         +0.20         +0.33         +0.40         +0.50           USp1         -0.60         -0.48         -0.32         -0.15         +1.50         +0.15         +0.38         +0.48         +0.60           USp2         -0.75         -0.60         -0.77         -0.48         -0.24         +0.12         +0.24         +0.38         +0.67         +0.98           USp4         -1.20         -0.96         -0.77         -0.48         -0.24         2.40         +0.24         +0.38         +0.67         +0.38           USp4         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.38         +0.48         +0.00           LSp1         -0.70         -0.80         -0.32         -0.11         1.90         +0.19         +0.38         +0.47         +0.26         +0.61         +1.20           LSp2         -0.95         -0.72         -0.48         -0.27         -0.54         +0.61         +1.08         +1.35 <t< td=""><td><u>4A&lt;</u></td><td><u>-5.00</u></td><td><u>-4.00</u></td><td><u>-3.00</u></td><td><u>-2.00</u></td><td><u>-1.00</u></td><td><u>10.00</u></td><td>+1.00</td><td>+2.00</td><td>+3.00</td><td>+4.00</td><td>+5.00</td></t<>	<u>4A&lt;</u>	<u>-5.00</u>	<u>-4.00</u>	<u>-3.00</u>	<u>-2.00</u>	<u>-1.00</u>	<u>10.00</u>	+1.00	+2.00	+3.00	+4.00	+5.00
Spins (Solo Spins for Pairs)           Spin in one position and no change of foot (upripht, layback, camel or sit)           USpB         -0.50         -0.40         -0.30         -0.20         -0.10         +0.00         +0.20         +0.30         +0.40         +0.50           USp1         -0.60         -0.48         -0.38         +0.24         +0.24         +0.38         +0.64         +0.95           USp3         -0.95         -0.77         -0.48         -0.24         +0.44         +0.72         +0.96         +1.20           USp4         -1.20         -0.96         -0.77         -0.48         -0.24         +0.44         +0.72         +0.96         +1.20           USp4         -0.75         -0.60         -0.48         -0.24         -0.12         +0.24         +0.48         +0.76         +0.95           USp3         -1.20         -0.96         -0.72         -0.48         -0.24         +0.15         +0.38         +0.46         +0.60         +1.20           USp4         -1.30         -0.76         -0.85         -0.24         +0.01         +0.92         +0.38         +0.44         +0.55           USp4         -1.30         -0.81         -0.38         -0.14												
Spin in one position and no change of foot (upright, layback, camel or sit)           USpB         -0.50         -0.40         -0.30         -0.20         +0.10         +0.00         +0.30         +0.40         +0.50           USp1         -0.60         -0.48         -0.36         -0.24         -0.12         +0.20         +0.36         +0.48         +0.60         +0.75         +0.36         +0.48         +0.60         +0.75         +0.36         +0.48         +0.60         +0.75         +0.38         +0.57         +0.76         +0.25         +0.76         +0.24         +0.44         +0.72         +0.96         +1.20           USp4         -1.20         -0.96         -0.76         -0.57         -0.38         -0.15         1.50         +0.15         +0.36         +0.48         +0.60         +0.75           USp2         -0.95         -0.76         -0.57         -0.38         -0.12         +0.24         +0.48         +0.77         +0.60         +0.75           USp3         -1.20         -0.96         -0.27         -0.48         +0.22         +0.31         +0.48         +0.72         +0.96         +0.28           USp4         -1.35         -1.06         -0.81         -0.28         +0.27<	Spins (Solo Spins	for Pair	s)									
USpB         -0.50         -0.40         -0.50         -0.40         -0.50           USp1         -0.60         -0.48         -0.60         -0.45         -0.30         -0.12         +0.24         +0.36         +0.46         +0.60           USp2         -0.75         -0.60         -0.45         -0.30         -0.15         +0.36         +0.45         +0.60         +0.76         +0.95           USp4         -1.20         -0.96         -0.72         -0.48         -0.24         +0.24         +0.48         +0.72         +0.96         +1.20           USp4         -1.20         -0.96         -0.72         -0.48         -0.24         +0.40         +0.24         +0.48         +0.72         +0.96         +1.20           USp1         -0.75         -0.60         -0.45         -0.30         -0.12         1.20         +0.12         +0.36         +0.48         +0.07         +0.95           USp1         -0.75         -0.60         -0.44         -0.27         2.70         +0.27         +0.48         +0.72         +0.96         +1.20           LSp3         -1.20         -0.33         -0.22         2.70         +0.27         +0.54         +0.72         +0.96	Spin in one position	n and no	change	of foot (u	pright, la	yback, c	amel or s	it)	_			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	USpB	-0.50	-0.40	-0.30	-0.20	-0.10	1.00	+0.10	+0.20	+0.30	+0.40	+0.50
USp2         -0.75         -0.60         -0.45         -0.30         -0.15         1.50         +0.38         +0.57         +0.67         +0.75           USp4         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20           LSp8         -0.60         -0.48         -0.24         -0.12         1.20         +0.12         +0.24         +0.48         +0.72         +0.96         +1.20           LSp1         -0.75         -0.60         -0.45         -0.30         -0.15         +0.30         +0.15         +0.30         +0.45         +0.60         +0.75         +0.80         +0.75         +0.76         +0.95           LSp3         -1.20         -0.96         -0.72         -0.48         -0.27         2.70         +0.27         +0.54         +0.81         +1.80         +1.35           LSp4         -1.35         -1.08         -0.44         -0.28         -0.11         +1.40         +0.11         +0.22         +0.33         +0.24         +0.56         +0.70           CSp2         -0.90         -0.72         -0.54         -0.28         -0.18         +0.38         +0.51	USp1	-0.60	-0.48	-0.36	-0.24	-0.12	1.20	+0.12	+0.24	+0.36	+0.48	+0.60
USp3         -0.95         -0.76         -0.57         -0.38         -0.19         +0.94         +0.24         +0.48         +0.77         +0.96         +1.20           LSpB         -0.60         -0.48         -0.24         -0.12         +0.24         +0.48         +0.72         +0.96         +1.20           LSpB         -0.75         -0.80         -0.45         -0.30         -0.15         1.50         +0.15         +0.30         +0.45         +0.00         +0.48         +0.72         +0.96         +1.20           LSp1         -0.75         -0.60         -0.45         -0.33         -0.27         +0.44         +0.24         +0.24         +0.36         +0.66         +0.76         +0.95           LSp1         -0.35         -0.72         -0.48         -0.27         +0.27         +0.27         +0.54         +0.81         +1.08         +1.35           CSp1         -0.70         -0.56         -0.42         -0.28         -0.11         1.40         +0.11         +0.22         +0.33         +0.44         +0.55           CSp1         -0.70         -0.56         -0.42         -0.28         -0.31         +0.23         +0.44         +0.55         +0.44         +0.57 <td>USp2</td> <td>-0.75</td> <td>-0.60</td> <td>-0.45</td> <td>-0.30</td> <td>-0.15</td> <td>1.50</td> <td>+0.15</td> <td>+0.30</td> <td>+0.45</td> <td>+0.60</td> <td>+0.75</td>	USp2	-0.75	-0.60	-0.45	-0.30	-0.15	1.50	+0.15	+0.30	+0.45	+0.60	+0.75
USp4         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20           LSpB         -0.60         -0.48         -0.36         -0.12         1.20         +0.12         +0.24         +0.36         +0.48         +0.60         +0.75         -0.56         -0.38         -0.15         1.50         +0.15         +0.30         +0.57         +0.38         +0.57         +0.38         +0.12         +0.24         +0.48         +0.72         +0.96         +1.20           LSp1         -1.35         -1.08         -0.81         -0.54         -0.27         2.70         +0.27         +0.54         +0.81         +1.08         +1.20           LSp4         -1.35         -1.044         -0.33         -0.22         -0.11         1.10         +0.11         +0.22         +0.33         +0.44         +0.55           CSp1         -0.76         -0.56         -0.42         -0.28         -0.14         +0.011         +0.22         +0.33         +0.44         +0.52           CSp2         -0.90         -0.72         -0.54         -0.32         -0.06         +0.24         +0.23         +0.64         +0.82	USp3	-0.95	-0.76	-0.57	-0.38	-0.19	1.90	+0.19	+0.38	+0.57	+0.76	+0.95
LSpB         -0.60         -0.48         -0.36         -0.24         -0.12         +0.24         +0.24         +0.36         +0.48         +0.60           LSp1         -0.75         -0.60         -0.45         -0.30         -0.15         1.60         +0.15         +0.30         +0.45         +0.06         +0.075           LSp2         -0.95         -0.76         -0.57         -0.38         -0.24         +0.24         +0.24         +0.48         +0.77         +0.96         +1.20           LSp3         -1.20         -0.96         -0.72         -0.48         -0.22         +0.44         +0.24         +0.44         +0.48         +0.77         +0.54         +0.81         +1.08         +1.35           LSp4         -1.35         -1.08         -0.81         -0.24         -0.11         +1.00         +0.11         +0.22         +0.33         +0.44         +0.55           CSp1         -0.70         -0.56         -0.42         -0.28         -0.11         +0.04         +0.22         +0.33         +0.44         +0.55           CSp1         -0.70         -0.56         -0.52         -0.26         2.00         +0.26         +0.52         +0.90         +0.27         +0.44 <td>USp4</td> <td>-1.20</td> <td>-0.96</td> <td>-0.72</td> <td>-0.48</td> <td>-0.24</td> <td>2.40</td> <td>+0.24</td> <td>+0.48</td> <td>+0.72</td> <td>+0.96</td> <td>+1.20</td>	USp4	-1.20	-0.96	-0.72	-0.48	-0.24	2.40	+0.24	+0.48	+0.72	+0.96	+1.20
LSpB         -0.60         -0.48         -0.24         -0.12         1.20         +0.24         +0.38         +0.48         +0.60           LSp1         -0.75         -0.60         -0.45         -0.38         -0.15         1.60         +0.15         +0.38         +0.67         +0.66         +0.75           LSp2         -0.95         -0.76         -0.57         -0.38         -0.19         +0.38         +0.57         +0.76         +0.95           LSp3         -1.30         -0.96         -0.72         -0.48         -0.24         +0.44         +0.35         +1.08         +1.30           CSp8         -0.55         -0.44         -0.33         -0.22         -0.11         1.10         +0.11         +0.22         +0.33         +0.44         +0.55           CSp1         -0.70         -0.56         -0.44         -0.33         -0.22         -0.11         1.10         +0.11         +0.23         +0.42         +0.55         +0.70         CSp2         -0.90         -0.72         -0.69         -0.46         -0.23         2.30         +0.22         +0.33         +0.44         +0.55           Sp1         -1.00         -1.04         -0.52         -0.26         2.60												
LSp1         -0.75         -0.60         -0.45         -0.30         -0.15         +0.30         +0.45         +0.60         +0.75           LSp2         -0.95         -0.76         -0.77         -0.38         -0.19         +0.19         +0.38         +0.57         +0.76         +0.75           LSp3         -1.20         -0.96         -0.72         -0.48         -0.22         +0.44         +0.24         +0.48         +0.77         +0.54         +0.81         +1.08           LSp4         -1.35         -1.08         -0.81         -0.22         -2.70         +0.27         +0.54         +0.81         +1.08         +1.18           CSp4         -0.70         -0.56         -0.42         -0.28         -0.14         +0.40         +0.56         +0.77         +0.50         +0.76         +0.54         +0.72         +0.90         +0.54         +0.72         +0.90         +0.55         +0.76         +1.04         +1.35           CSp2         -0.90         -0.72         -0.54         -0.36         -0.23         2.30         +0.62         +0.51         +0.56         +0.76         +1.04         +1.30           CSp3         -1.15         -0.29         -0.26         -0.13 <td>LSpB</td> <td>-0.60</td> <td>-0.48</td> <td>-0.36</td> <td>-0.24</td> <td>-0.12</td> <td>1.20</td> <td>+0.12</td> <td>+0.24</td> <td>+0.36</td> <td>+0.48</td> <td>+0.60</td>	LSpB	-0.60	-0.48	-0.36	-0.24	-0.12	1.20	+0.12	+0.24	+0.36	+0.48	+0.60
LSp2         -0.95         -0.76         -0.77         -0.38         -0.19         1.30         +0.19         +0.38         +0.57         +0.76         +0.95           LSp3         -1.20         -0.96         -0.72         -0.48         -0.24         +0.24         +0.48         +0.57         +0.56         +1.05         +1.05           LSp4         -1.35         -1.08         -0.81         -0.24         -0.24         +0.48         +0.31         +1.08         +1.35           CSp8         -0.55         -0.44         -0.33         -0.22         -0.11         1.10         +0.11         +0.22         +0.33         +0.44         +0.55           CSp1         -0.70         -0.56         -0.42         -0.28         -0.14         1.40         +0.18         +0.36         +0.42         +0.55         +0.72         +0.90           CSp3         -1.15         -0.92         -0.69         -0.46         -0.23         2.30         +0.23         +0.46         +0.64         +0.32         +0.44         +0.55           SSp1         -0.65         -0.52         -0.39         -0.26         -0.13         1.30         +0.13         +0.26         +0.33         +0.44         +0.55	LSp1	-0.75	-0.60	-0.45	-0.30	-0.15	1.50	+0.15	+0.30	+0.45	+0.60	+0.75
LSp3         1.120         1.021         1.022         1.033         1.044         1.030           CSp4         -1.30         -1.04         -0.78         -0.221         -0.10         1.01         +0.22         +0.33         +0.44         +0.55           SSp1         -0.65         -0.52         -0.39         -0.26         -0.60         +0.16         +0.32         +0.44         +0.63         +0.44         +0.55	LSo2	-0.95	-0.76	-0.57	-0.38	-0.19	1.90	+0.19	+0.38	+0.57	+0.76	+0.95
LSp4         -1.35         -1.08         -0.81         -0.84         -0.27         +0.27         +0.28         +0.81         +1.08         +1.125           CSpB         -0.55         -0.44         -0.33         -0.22         -0.11         1.10         +0.11         +0.27         +0.54         +0.81         +1.08         +1.125           CSpB         -0.55         -0.44         -0.33         -0.22         -0.11         1.10         +0.11         +0.22         +0.33         +0.44         +0.56         +0.70           CSp2         -0.90         -0.72         -0.54         -0.38         -0.18         1.80         +0.18         +0.36         +0.54         +0.72         +0.90           CSp2         -1.30         -1.04         -0.78         -0.52         -0.26         2.60         +0.23         +0.44         +0.53         +1.04         +1.30           SSp1         -0.65         -0.52         -0.39         -0.26         2.60         +0.26         +0.33         +0.24         +0.83         +0.44         +0.85           SSp2         -0.80         -0.64         -0.48         +0.32         -0.16         1.60         +0.15         +0.33         +0.24         +0.24	LSn3	-1.20	-0.96	-0.72	-0.48	-0.24	2.40	+0.24	+0.48	+0.72	+0.96	+1.20
CSp1         CSP         CSP <td>LSp4</td> <td>-1.35</td> <td>-1.08</td> <td>-0.81</td> <td>-0.54</td> <td>-0.27</td> <td>2.70</td> <td>+0.27</td> <td>+0.54</td> <td>+0.81</td> <td>+1.08</td> <td>+1.35</td>	LSp4	-1.35	-1.08	-0.81	-0.54	-0.27	2.70	+0.27	+0.54	+0.81	+1.08	+1.35
CSpB         -0.55         -0.44         -0.33         -0.22         -0.11         1.10         +0.11         +0.22         +0.33         +0.44         +0.55           CSp1         -0.70         -0.56         -0.42         -0.28         -0.14         1.40         +0.14         +0.28         +0.42         +0.56         +0.70           CSp3         -1.15         -0.92         -0.69         -0.64         -0.23         2.30         +0.23         +0.46         +0.54         +0.72         +0.90           CSp3         -1.15         -0.92         -0.69         -0.46         -0.23         2.30         +0.23         +0.46         +0.69         +1.24         +1.30           CSp4         -1.30         -1.04         -0.78         -0.22         -0.11         1.10         +0.11         +0.22         +0.33         +0.44         +0.55           SSp1         -0.65         -0.52         -0.33         -0.26         -0.11         1.10         +0.11         +0.22         +0.33         +0.44         +0.55           SSp2         -0.80         0.64         -0.83         -0.22         -0.11         1.01         +0.21         +0.42         +0.63         +0.44         +0.55	Lopi	-1.00	1.00	-0.01	-0.01	0.21	2	.0.21	10.01	10.01	11.00	11.00
CSp1         0.57         0.58         0.42         0.11         1.10         10.11         10.22         10.23         10.42         10.22         10.23         10.14         10.22         10.22         10.23         10.14         10.22         10.22         10.23         10.14         10.22         10.23         10.14         10.22         10.23         10.24         10.35         10.74         10.23         10.24         10.24         10.25         10.26         10.25         10.22         10.23         10.24         10.35         10.44         10.35         10.44         10.35         10.44         10.35         10.44         10.30         10.45         10.22         10.35         10.44         10.35         10.44         10.33         10.44         10.35         10.44         10.35         10.44         10.35         10.44         10.35         10.44         10.35         10.44         10.35         10.44         10.35         10.44         10.35         10.44         10.35         10.44         10.35         10.44         10.35         10.44         10.35         10.44         10.35         10.44         10.35         10.44         10.35         10.44         10.35         10.54         10.35         10.55	CSnB	0.55	0.44	0.33	0.22	0.11	1 10	+0.11	+0.22	+0.33	+0.44	+0.55
CSp1         -0.70         -0.33         -0.72         -0.36         -0.18         1.40         +0.18         +0.26         +0.72         +0.92           CSp2         -0.90         -0.72         -0.54         -0.36         -0.18         1.80         +0.18         +0.26         +0.54         +0.72         +0.90           CSp3         -1.15         -0.92         -0.69         -0.46         -0.23         2.30         +0.23         +0.46         +0.69         +0.92         +1.15           CSp4         -1.30         -1.04         -0.76         -0.52         -0.26         2.60         +0.22         +0.78         +1.04         +1.30           SSp1         -0.65         -0.52         -0.39         -0.26         -0.11         1.10         +0.11         +0.22         +0.33         +0.52         +0.65           SSp1         -0.66         -0.52         -0.39         +0.26         +0.25         +0.39         +0.52         +0.48         +0.63         +0.42         +0.63         +0.51         +0.80         +0.55         +0.59         +0.64         +0.80         +0.55         +0.59         +0.60         +0.75         +0.10         +0.42         +0.63         +0.42         +0.48 </td <td>CSpb CSp1</td> <td>0.33</td> <td>-0.44</td> <td>-0.33</td> <td>0.22</td> <td>-0.11</td> <td>1.10</td> <td>+0.11</td> <td>+0.22</td> <td>+0.33</td> <td>+0.44</td> <td>+0.33</td>	CSpb CSp1	0.33	-0.44	-0.33	0.22	-0.11	1.10	+0.11	+0.22	+0.33	+0.44	+0.33
CSp2         -0.72         -0.73         -0.78         -0.76         -1.80         +0.36         +0.36         +0.72         +0.72           CSp3         -1.15         -0.92         -0.69         -0.23         2.08         +0.24         +0.36         +0.24         +0.36         +0.24         +0.36         +0.24         +0.36         +0.24         +0.46         +0.69         +0.72         +0.30           CSp4         -1.30         -1.04         -0.78         -0.52         -0.26         2.60         +0.22         +0.78         +1.04         +1.30           SSp1         -0.65         -0.52         -0.39         -0.26         -0.11         1.00         +0.13         +0.26         +0.33         +0.44         +0.65           SSp1         -0.65         -0.52         -0.39         -0.22         -0.16         1.80         +0.18         +0.23         +0.64         +0.68           SSp3         -1.05         -0.84         -0.63         -0.42         -0.21         2.10         +0.25         +0.50         +0.75         +1.00         +1.25           Flying Spin (any position – upright, layback, camel or sit)         FUSp1         -0.85         -0.60         -0.41         -0.17         +0.	CSp1	-0.70	-0.50	-0.42	-0.20	-0.14	1.40	10.14	+0.20	+0.42	+0.30	+0.70
CSp3       -1.15       -0.32       -0.03       -0.03       -0.23       2.30       +0.23       +0.46       +0.03       +0.13       +1.04       +1.30         CSp4       -1.30       -1.04       -0.78       -0.52       -0.26       2.60       +0.23       +0.46       +0.03       +1.04       +1.30         SSp1       -0.65       -0.52       -0.33       -0.22       -0.11       1.10       +0.11       +0.26       +0.39       +0.44       +0.55         SSp1       -0.65       -0.52       -0.32       -0.16       1.60       +0.16       +0.32       +0.48       +0.64       +0.80         SSp3       -1.05       -0.84       -0.63       -0.42       -0.25       2.50       +0.25       +0.50       +0.75       +1.00       +1.25         Flying Spin (any position - upright, layback, camel or sit)       -0.75       -0.60       -0.45       -0.30       -0.15       +0.30       +0.45       +0.60       +0.75         FUSp1       -0.86       -0.51       -0.34       -0.17       1.70       +0.17       +0.34       +0.51       +0.68       +0.85         FUSp2       -1.00       -0.80       -0.60       -0.44       -0.22       2.00	CSp2	-0.90	-0.72	-0.54	-0.30	-0.10	1.00	+0.10	+0.30	+0.54	+0.72	+0.90
CSp4         -1.04         -0.78         -0.22         -0.26         2.00         +0.26         +0.32         +0.76         +1.04         +1.30           SSpB         -0.55         -0.44         -0.33         -0.22         -0.11         1.10         +0.11         +0.22         +0.33         +0.44         +0.55           SSp1         -0.65         -0.52         -0.39         -0.26         -0.13         1.30         +0.13         +0.26         +0.39         +0.52         +0.68           SSp1         -0.68         -0.63         -0.42         -0.21         2.10         +0.25         +0.64         +0.68         +0.64         +0.83           SSp3         -1.05         -0.84         -0.63         -0.42         -0.21         2.10         +0.25         +0.50         +0.75         +1.00         +1.25           Flying Spin (any position – upright, layback, camel or sit)         -0.25         2.50         +0.15         +0.30         +0.45         +0.60         +0.75           FUSp1         -0.85         -0.68         -0.51         -0.34         -0.17         1.70         +0.17         +0.34         +0.51         +0.68         +0.55           FUSp2         -1.00         -0.86 <td>CSp3</td> <td>-1.15</td> <td>-0.92</td> <td>-0.09</td> <td>-0.40</td> <td>-0.23</td> <td>2.30</td> <td>+0.23</td> <td>+0.40</td> <td>+0.09</td> <td>+0.92</td> <td>+1.15</td>	CSp3	-1.15	-0.92	-0.09	-0.40	-0.23	2.30	+0.23	+0.40	+0.09	+0.92	+1.15
SSpB         -0.55         -0.44         -0.33         -0.22         -0.11         1.10         +0.11         +0.22         +0.33         +0.44         +0.55           SSp1         -0.65         -0.52         -0.39         -0.26         -0.13         1.30         +0.13         +0.26         +0.39         +0.52         +0.65           SSp2         -0.80         -0.64         -0.42         -0.21         2.10         +0.21         +0.42         +0.63         +0.48         +1.08           SSp4         -1.25         -1.00         -0.75         -0.50         -0.25         2.50         +0.25         +0.50         +0.75         +1.00         +1.25           Flying Spin (any position – upright, layback, camel or sit)         -         -         -0.30         -0.15         1.50         +0.15         +0.30         +0.45         +0.60         +0.75           FUSp1         -0.88         -0.66         -0.72         -0.48         -0.24         2.40         +0.24         +0.48         +0.60         +0.60         +0.60         +0.60         +0.60         +0.60         +0.60         +0.60         +0.60         +0.60         +0.60         +0.60         +0.60         +0.60         +0.60         +0.60<	CSp4	-1.50	-1.04	-0.70	-0.52	-0.20	2.00	+0.20	+0.52	+0.70	+1.04	+1.50
SSpb       -0.35       -0.44       -0.33       -0.22       -0.11       1.10       +0.11       +0.22       +0.33       +0.44       +0.35         SSp1       -0.65       -0.52       -0.39       -0.26       -0.13       1.30       +0.11       +0.22       +0.48       +0.64       +0.80         SSp2       -0.80       -0.64       -0.48       -0.22       -0.16       1.60       +0.16       +0.22       +0.63       +0.84       +1.05         SSp4       -1.25       -1.00       -0.75       -0.50       -0.25       2.50       +0.25       +0.50       +0.75       +1.00       +1.25         Flying Spin (any position - upright, layback, camel or sit)       -       -       -       -       +0.44       +0.21       +0.44       +0.63       +0.75         FUSp8       -0.75       -0.60       -0.45       -0.30       -0.15       1.50       +0.15       +0.30       +0.45       +0.60       +0.75         FUSp1       -0.86       -0.51       -0.34       -0.17       1.70       +0.17       +0.48       +0.72       +0.96       +1.20         FUSp3       -1.20       -0.96       -0.72       -0.48       -0.22       2.40       +0.24 </td <td>CC=P</td> <td>0.55</td> <td>0.44</td> <td>0.22</td> <td>0.00</td> <td>0.11</td> <td>4.40</td> <td>10.11</td> <td>.0.22</td> <td>10.22</td> <td>10.44</td> <td>10.55</td>	CC=P	0.55	0.44	0.22	0.00	0.11	4.40	10.11	.0.22	10.22	10.44	10.55
SSp1       -0.82       -0.32       -0.26       -0.13       1.30       +0.13       +0.26       +0.33       +0.32       +0.33       +0.32       +0.33       +0.32       +0.33       +0.32       +0.33       +0.32       +0.63       +0.42       +0.33       +0.32       +0.64       +0.80         SSp3       -1.05       -0.84       -0.63       -0.42       -0.21       2.10       +0.21       +0.42       +0.63       +0.84       +1.05         SSp4       -1.25       -1.00       -0.75       -0.50       -0.25       2.50       +0.25       +0.50       +0.75       +1.00       +1.25         Flying Spin (any position – upright, layback, camel or sit)       -0.15       +0.30       +0.45       +0.60       +0.75       +0.60       +0.75       +0.60       +0.75       +0.60       +0.75       +0.60       +0.75       +0.60       +0.72       +0.48       +0.72       +0.68       +0.85       FUSp2       -1.00       -0.80       -0.60       -0.40       -0.20       2.00       +0.24       +0.44       +0.48       +0.72       +0.96       +1.20       FUSp3       -1.45       -1.16       -0.87       -0.28       -0.29       2.90       +0.29       +0.58       +0.87       +	SSpb SSpb	-0.55	-0.44	-0.33	-0.22	-0.11	1.10	+0.11	+0.22	+0.33	+0.44	+0.55
SSp2         -0.04         -0.03         -0.16         1.00         +0.16         +0.12         +0.16         +0.12         +0.16         +0.12         +0.16         +0.16         +0.12         +0.16         +0.16         +0.16         +0.16         +0.16         +0.12         +0.16         +0.16         +0.12         +0.16         +0.16         +0.16         +0.16         +0.16         +0.16         +0.16         +0.16         +0.16         +0.16         +0.15         +0.10         +0.17         +1.00         +1.25           Flying Spin (any position – upright, layback, camel or sit)         -0.75         -0.60         -0.45         -0.30         -0.15         1.50         +0.17         +0.34         +0.51         +0.68         +0.85           FUSp1         -0.86         -0.51         -0.34         -0.21         2.00         +0.22         +0.48         +0.72         +0.96         +1.20           FUSp3         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.40         +0.48         +0.72         +0.96         +1.20           FUSp4         -1.45         -1.16         -0.23         -0.11         1.13         +0.11         +0.43         +0.45	55p1	-0.05	-0.52	-0.39	-0.20	-0.13	1.30	+0.13	+0.20	+0.39	+0.52	+0.05
SSp3         -1.05         -0.64         -0.63         -0.42         -0.21         2.10         +0.21         +0.42         +0.63         +0.63         +1.05           SSp4         -1.25         -1.00         -0.75         -0.50         -0.25         2.50         +0.25         +0.50         +0.50         +1.00         +1.25           Flying Spin (any position - upright, layback, camel or sit)         -         -         +0.15         +0.30         +0.45         +0.60         +0.75           FUSp1         -0.85         -0.60         -0.45         -0.30         -0.15         1.50         +0.15         +0.30         +0.45         +0.60         +0.75           FUSp2         -1.00         -0.80         -0.60         -0.40         -0.20         2.00         +0.24         +0.48         +0.72         +0.96         +1.20           FUSp3         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20           FUSp4         -1.45         -1.16         -0.87         -0.58         -0.29         2.90         +0.24         +0.48         +0.72         +0.96         +0.57           FUSp4	55p2	-0.00	-0.04	-0.40	-0.32	-0.16	1.00	+0.16	+0.32	+0.40	+0.04	+0.00
SSp4         -1.25         -1.00         -0.75         -0.50         -0.25         2.50         +0.25         +0.50         +0.75         +1.00         +1.25           Flying Spin (any position – upright, layback, camel or sit)         -0.75         -0.60         -0.45         -0.30         -0.15         1.50         +0.15         +0.30         +0.45         +0.60         +0.75           FUSp1         -0.85         -0.68         -0.51         -0.34         -0.17         1.70         +0.17         +0.44         +0.51         +0.68         +0.85           FUSp2         -1.00         -0.80         -0.60         -0.40         -0.20         2.00         +0.24         +0.44         +0.60         +0.80         +1.00           FUSp3         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20           FUSp4         -1.45         -1.16         -0.87         -0.58         -0.29         2.90         +0.29         +0.88         +0.87         +1.16         +1.45           FUSp4V         -0.57         -0.45         -0.34         -0.21         -11         1.13         +0.11         +0.24         +	5503	-1.05	-0.84	-0.63	-0.42	-0.21	2.10	+0.21	+0.42	+0.63	+0.84	+1.05
Flying Spin (any position – upngnt, layback, camel or sit)           FUSpB         -0.75         -0.60         -0.45         -0.30         -0.15         1.50         +0.15         +0.30         +0.45         +0.60         +0.75           FUSp1         -0.85         -0.68         -0.51         -0.34         -0.17         1.70         +0.17         +0.34         +0.51         +0.68         +0.85           FUSp2         -1.00         -0.80         -0.60         -0.40         -0.20         2.00         +0.20         +0.40         +0.60         +0.80         +1.00           FUSp3         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20           FUSp4         -1.45         -1.16         -0.87         -0.58         -0.29         2.90         +0.29         +0.34         +0.45         +0.57           FUSp4V         -0.57         -0.45         -0.34         -0.23         -0.11         1.13         +0.13         +0.34         +0.45         +0.57           FUSp1V         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.45         +	55p4	-1.25	-1.00	-0.75	-0.50	-0.25	2.50	+0.25	+0.50	+0.75	+1.00	+1.25
FUSpB         -0.75         -0.60         -0.45         -0.30         -0.15         1.30         +0.17         +0.34         +0.61         +0.75           FUSp1         -0.85         -0.68         -0.61         -0.34         -0.17         1.70         +0.17         +0.34         +0.51         +0.68         +0.68           FUSp2         -1.00         -0.80         -0.60         -0.40         -0.20         2.00         +0.24         +0.48         +0.72         +0.96         +1.20           FUSp3         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20           FUSp4         -1.45         -1.16         -0.87         -0.58         -0.29         2.90         +0.29         +0.58         +0.87         +1.16         +1.45           FUSp1V         -0.64         -0.51         -0.38         -0.21         2.90         +0.29         +0.58         +0.81         +0.45         +0.57           FUSp1V         -0.64         -0.51         -0.38         -0.21         1.11         1.13         +0.115         +0.38         +0.61         +0.75           FUSp2V         -0.75 </td <td>Flying Spin (any po</td> <td>sition – L</td> <td>upright, l</td> <td>ayback, o</td> <td>camel or</td> <td>SIT)</td> <td>4.50</td> <td>.0.45</td> <td></td> <td>.0.45</td> <td>.0.00</td> <td>0.75</td>	Flying Spin (any po	sition – L	upright, l	ayback, o	camel or	SIT)	4.50	.0.45		.0.45	.0.00	0.75
FUSp1         -0.85         -0.88         -0.51         -0.34         -0.17         1.70         +0.717         +0.34         +0.51         +0.88         +0.85           FUSp2         -1.00         -0.80         -0.60         -0.40         -0.20         2.00         +0.20         +0.40         +0.60         +0.80         +1.00           FUSp3         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.29         +0.58         +0.87         +1.96         +1.20           FUSp4         -1.45         -1.16         -0.87         -0.58         -0.29         2.90         +0.29         +0.58         +0.87         +1.16         +1.45           FUSpBV         -0.57         -0.45         -0.34         -0.23         -0.11         1.13         +0.11         +0.23         +0.34         +0.45         +0.57           FUSpBV         -0.57         -0.45         -0.38         -0.21         1.20         +0.13         +0.26         +0.38         +0.51         +0.64           FUSp1V         -0.64         -0.51         -0.36         -0.18         1.80         +0.18         +0.36         +0.54         +0.60         +0.72         +0.90	FUSpB	-0.75	-0.60	-0.45	-0.30	-0.15	1.50	+0.15	+0.30	+0.45	+0.60	+0.75
FUSp2       -1.00       -0.80       -0.60       -0.40       -0.20       2.00       +0.20       +0.40       +0.60       +0.80       +1.00         FUSp3       -1.20       -0.96       -0.72       -0.48       -0.24       2.40       +0.24       +0.48       +0.72       +0.96       +1.20         FUSp4       -1.16       -0.87       -0.58       -0.29       2.90       +0.29       +0.58       +0.87       +1.16       +1.45         FUSp8V       -0.57       -0.45       -0.34       -0.23       -0.11       1.13       +0.11       +0.23       +0.34       +0.45       +0.57         FUSp1V       -0.64       -0.51       -0.38       -0.26       -0.13       1.28       +0.13       +0.26       +0.38       +0.51       +0.64         FUSp2V       -0.75       -0.60       -0.45       -0.30       -0.15       1.50       +0.15       +0.30       +0.45       +0.60       +0.75         FUSp3V       -0.90       -0.72       -0.54       -0.36       -0.18       1.80       +0.18       +0.36       +0.54       +0.72       +0.90         FUSp4V       -1.09       -0.87       -0.66       -0.72       -0.44       -0.22	FUSp1	-0.85	-0.68	-0.51	-0.34	-0.17	1.70	+0.17	+0.34	+0.51	+0.68	+0.85
FUSp3       -1.20       -0.96       -0.72       -0.48       -0.24       2.40       +0.24       +0.48       +0.72       +0.96       +1.20         FUSp4       -1.45       -1.16       -0.87       -0.58       -0.29       2.90       +0.29       +0.58       +0.87       +1.16       +1.45         FUSp8V       -0.57       -0.45       -0.34       -0.23       -0.11       1.13       +0.11       +0.23       +0.34       +0.45       +0.57         FUSp1V       -0.64       -0.51       -0.38       -0.26       -0.13       1.28       +0.13       +0.26       +0.38       +0.51       +0.64         FUSp2V       -0.75       -0.60       -0.45       -0.30       -0.15       1.50       +0.15       +0.30       +0.45       +0.60       +0.75         FUSp3V       -0.90       -0.72       -0.54       -0.36       -0.18       1.80       +0.18       +0.36       +0.51       +0.64       +0.72       +0.90         FUSp4V       -1.09       -0.87       -0.65       -0.44       -0.22       2.18       +0.22       +0.44       +0.65       +0.87       +1.09         FLSp1       -1.00       -0.80       -0.60       -0.44	FUSp2	-1.00	-0.80	-0.60	-0.40	-0.20	2.00	+0.20	+0.40	+0.60	+0.80	+1.00
FUSp4         -1.45         -1.16         -0.87         -0.58         -0.29         2.90         +0.29         +0.58         +0.87         +1.16         +1.45           FUSpBV         -0.57         -0.45         -0.34         -0.23         -0.11         1.13         +0.11         +0.23         +0.34         +0.45         +0.57           FUSp1V         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.26         +0.38         +0.51         +0.64           FUSp2V         -0.75         -0.60         -0.45         -0.30         -0.15         1.50         +0.15         +0.30         +0.45         +0.60         +0.75           FUSp3V         -0.90         -0.72         -0.54         -0.36         -0.18         1.80         +0.18         +0.36         +0.54         +0.72         +0.90           FUSp4V         -1.09         -0.87         -0.65         -0.44         -0.22         2.18         +0.22         +0.44         +0.65         +0.87         +1.09           FLSp4         -1.00         -0.80         -0.60         -0.40         -0.20         2.00         +0.24         +0.40         +0.60         +0.88         +1	FUSp3	-1.20	-0.96	-0.72	-0.48	-0.24	2.40	+0.24	+0.48	+0.72	+0.96	+1.20
FUSpBV         -0.57         -0.45         -0.34         -0.23         -0.11         1.13         +0.11         +0.23         +0.34         +0.45         +0.57           FUSp1V         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.26         +0.38         +0.51         +0.64           FUSp2V         -0.75         -0.60         -0.45         -0.30         -0.15         1.50         +0.13         +0.26         +0.38         +0.51         +0.60           FUSp3V         -0.90         -0.72         -0.54         -0.36         -0.18         1.80         +0.18         +0.36         +0.54         +0.72         +0.90           FUSp4V         -1.09         -0.87         -0.65         -0.44         -0.22         2.18         +0.22         +0.44         +0.65         +0.87         +1.09           FLSpB         -0.85         -0.68         -0.51         -0.34         -0.17         1.70         +0.17         +0.44         +0.65         +0.87         +1.09           FLSpB         -1.00         -0.80         -0.60         -0.20         2.00         +0.20         +0.44         +0.64         +0.83         +1.00	FUSp4	-1.45	-1.16	-0.87	-0.58	-0.29	2.90	+0.29	+0.58	+0.87	+1.16	+1.45
FUSpBV         -0.57         -0.45         -0.34         -0.23         -0.11         1.13         +0.11         +0.23         +0.34         +0.45         +0.57           FUSp1V         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.26         +0.38         +0.51         +0.64           FUSp2V         -0.75         -0.60         -0.45         -0.30         -0.15         1.50         +0.15         +0.30         +0.45         +0.60         +0.75           FUSp3V         -0.90         -0.72         -0.54         -0.36         -0.18         1.80         +0.18         +0.36         +0.54         +0.72         +0.90           FUSp4V         -1.09         -0.87         -0.65         -0.44         -0.22         2.18         +0.22         +0.44         +0.65         +0.87         +1.09           FUSp4V         -1.09         -0.87         -0.34         -0.17         1.70         +0.17         +0.44         +0.65         +0.87         +1.09           FLSp1         -1.00         -0.80         -0.60         -0.40         -0.20         2.00         +0.24         +0.40         +0.60         +0.89         +1.00												
FUSp1V         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.26         +0.38         +0.51         +0.64           FUSp2V         -0.75         -0.60         -0.45         -0.30         -0.15         1.50         +0.15         +0.30         +0.45         +0.60         +0.75           FUSp3V         -0.90         -0.72         -0.54         -0.36         -0.18         1.80         +0.18         +0.36         +0.54         +0.72         +0.90           FUSp4V         -1.09         -0.87         -0.65         -0.44         -0.22         2.18         +0.22         +0.44         +0.65         +0.87         +1.09           FUSp4V         -1.09         -0.87         -0.66         -0.17         1.70         +0.17         +0.34         +0.51         +0.68         +0.85           FLSp1         -1.00         -0.80         -0.60         -0.40         -0.20         2.00         +0.20         +0.40         +0.60         +0.80         +1.00           FLSp2         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20	FUSpBV	-0.57	-0.45	-0.34	-0.23	-0.11	1.13	+0.11	+0.23	+0.34	+0.45	+0.57
FUSp2V         -0.75         -0.60         -0.45         -0.30         -0.15         1.50         +0.15         +0.30         +0.45         +0.60         +0.75           FUSp3V         -0.90         -0.72         -0.54         -0.36         -0.18         1.80         +0.18         +0.36         +0.54         +0.72         +0.90           FUSp4V         -1.09         -0.87         -0.65         -0.44         -0.22         2.18         +0.22         +0.44         +0.65         +0.87         +1.09           FUSp4V         -1.09         -0.87         -0.65         -0.44         -0.22         2.18         +0.22         +0.44         +0.65         +0.87         +1.09           FUSp4V         -1.09         -0.87         -0.66         -0.40         -0.20         2.00         +0.20         +0.40         +0.68         +0.85           FLSp1         -1.00         -0.80         -0.60         -0.48         -0.29         2.00         +0.20         +0.40         +0.64         +0.80         +1.20           FLSp3         -1.45         -1.16         -0.87         -0.58         -0.29         2.90         +0.29         +0.58         +0.87         +1.16         +1.45	FUSp1V	-0.64	-0.51	-0.38	-0.26	-0.13	1.28	+0.13	+0.26	+0.38	+0.51	+0.64
FUSp3V         -0.90         -0.72         -0.54         -0.36         -0.18         1.80         +0.18         +0.36         +0.54         +0.72         +0.90           FUSp4V         -1.09         -0.87         -0.65         -0.44         -0.22         2.18         +0.22         +0.44         +0.65         +0.87         +1.09           FLSpB         -0.85         -0.68         -0.51         -0.34         -0.17         1.70         +0.44         +0.65         +0.87         +1.09           FLSp1         -1.00         -0.80         -0.60         -0.40         -0.20         2.00         +0.40         +0.60         +0.80         +1.00           FLSp2         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.40         +0.60         +0.80         +1.20           FLSp3         -1.45         -1.16         -0.87         -0.58         -0.29         2.90         +0.29         +0.58         +0.87         +1.16         +1.20           FLSp4         -1.60         -1.28         -0.96         -0.64         -0.32         3.20         +0.32         +0.64         +0.96         +1.28         +1.60           -	FUSp2V	-0.75	-0.60	-0.45	-0.30	-0.15	1.50	+0.15	+0.30	+0.45	+0.60	+0.75
FUSp4V         -1.09         -0.87         -0.65         -0.44         -0.22         2.18         +0.22         +0.44         +0.65         +0.87         +1.09           FLSpB         -0.85         -0.68         -0.51         -0.34         -0.17         1.70         +0.17         +0.34         +0.51         +0.68         +0.85           FLSp1         -1.00         -0.80         -0.60         -0.40         -0.20         2.00         +0.20         +0.40         +0.60         +0.80         +1.00           FLSp2         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20           FLSp3         -1.45         -1.16         -0.87         -0.58         -0.29         2.90         +0.29         +0.58         +0.87         +1.16         +1.45           FLSp4         -1.60         -1.28         -0.96         -0.64         -0.32         3.20         +0.32         +0.64         +0.96         +1.28         +1.60           FLSp4V         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.26         +0.38         +0.51         +0.64	FUSp3V	-0.90	-0.72	-0.54	-0.36	-0.18	1.80	+0.18	+0.36	+0.54	+0.72	+0.90
FLSpB         -0.85         -0.68         -0.51         -0.34         -0.17         1.70         +0.17         +0.34         +0.51         +0.68         +0.85           FLSp1         -1.00         -0.80         -0.60         -0.40         -0.20         2.00         +0.20         +0.40         +0.60         +0.80         +1.00           FLSp2         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20           FLSp3         -1.45         -1.16         -0.87         -0.58         -0.29         2.90         +0.29         +0.58         +0.87         +1.16         +1.45           FLSp4         -1.60         -1.28         -0.96         -0.64         -0.32         3.20         +0.32         +0.64         +0.96         +1.28         +1.60           FLSp4         -1.60         -1.28         -0.96         -0.64         -0.32         3.20         +0.32         +0.64         +0.96         +1.28         +1.60           FLSp1V         -0.75         -0.60         -0.45         -0.30         -0.15         +0.30         +0.45         +0.60         +0.75           FLSp2V <td>FUSp4V</td> <td>-1.09</td> <td>-0.87</td> <td>-0.65</td> <td>-0.44</td> <td>-0.22</td> <td>2.18</td> <td>+0.22</td> <td>+0.44</td> <td>+0.65</td> <td>+0.87</td> <td>+1.09</td>	FUSp4V	-1.09	-0.87	-0.65	-0.44	-0.22	2.18	+0.22	+0.44	+0.65	+0.87	+1.09
FLSpB         -0.85         -0.68         -0.51         -0.34         -0.17         1.70         +0.17         +0.34         +0.51         +0.68         +0.85           FLSp1         -1.00         -0.80         -0.60         -0.40         -0.20         2.00         +0.20         +0.40         +0.60         +0.80         +1.00           FLSp2         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20           FLSp3         -1.45         -1.16         -0.87         -0.58         -0.29         2.90         +0.29         +0.58         +0.87         +1.16         +1.45           FLSp4         -1.60         -1.28         -0.96         -0.64         -0.32         3.20         +0.32         +0.64         +0.96         +1.28         +1.60           FLSpBV         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.26         +0.38         +0.51         +0.64           FLSpIV         -0.75         -0.60         -0.45         -0.30         -0.15         1.50         +0.15         +0.30         +0.45         +0.60         +0.75												
FLSp1         -1.00         -0.80         -0.60         -0.40         -0.20         2.00         +0.20         +0.40         +0.60         +0.80         +1.00           FLSp2         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20           FLSp3         -1.45         -1.16         -0.87         -0.58         -0.29         2.90         +0.29         +0.58         +0.87         +1.16         +1.45           FLSp4         -1.60         -1.28         -0.96         -0.64         -0.32         3.20         +0.32         +0.64         +0.96         +1.28         +1.60           HSp8V         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.26         +0.38         +0.51         +0.64           FLSp8V         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.26         +0.38         +0.51         +0.64           FLSp8V         -0.60         -0.45         -0.30         -0.15         1.50         +0.15         +0.30         +0.45         +0.60         +0.75 <tr< td=""><td>FLSpB</td><td>-0.85</td><td>-0.68</td><td>-0.51</td><td>-0.34</td><td>-0.17</td><td>1.70</td><td>+0.17</td><td>+0.34</td><td>+0.51</td><td>+0.68</td><td>+0.85</td></tr<>	FLSpB	-0.85	-0.68	-0.51	-0.34	-0.17	1.70	+0.17	+0.34	+0.51	+0.68	+0.85
FLSp2         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20           FLSp3         -1.45         -1.16         -0.87         -0.58         -0.29         2.90         +0.29         +0.58         +0.87         +1.16         +1.45           FLSp4         -1.60         -1.28         -0.96         -0.64         -0.32         3.20         +0.32         +0.64         +0.96         +1.28         +1.60           FLSp8V         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.26         +0.38         +0.51         +0.64           FLSp8V         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.26         +0.38         +0.51         +0.64           FLSp8V         -0.60         -0.45         -0.30         -0.15         1.50         +0.13         +0.26         +0.38         +0.51         +0.64           FLSp1V         -0.75         -0.60         -0.45         -0.30         -0.15         +0.30         +0.45         +0.60         +0.75           FLSp2V         -0.90	FLSp1	-1.00	-0.80	-0.60	-0.40	-0.20	2.00	+0.20	+0.40	+0.60	+0.80	+1.00
FLSp3         -1.45         -1.16         -0.87         -0.58         -0.29         2.90         +0.29         +0.58         +0.87         +1.16         +1.45           FLSp4         -1.60         -1.28         -0.96         -0.64         -0.32         3.20         +0.32         +0.64         +0.96         +1.28         +1.60           FLSp4         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.64         +0.96         +1.28         +1.60           FLSp8V         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.64         +0.96         +1.28         +1.60           FLSp8V         -0.60         -0.45         -0.30         -0.15         1.50         +0.13         +0.26         +0.38         +0.51         +0.64           FLSp1V         -0.75         -0.60         -0.45         -0.30         -0.15         +0.30         +0.45         +0.60         +0.75           FLSp2V         -0.90         -0.72         -0.54         -0.36         -0.18         1.80         +0.18         +0.36         +0.54         +0.72         +0.90           FLSp3V         -1.09	FLSp2	-1.20	-0.96	-0.72	-0.48	-0.24	2.40	+0.24	+0.48	+0.72	+0.96	+1.20
FLSp4         -1.60         -1.28         -0.96         -0.64         -0.32         3.20         +0.32         +0.64         +0.96         +1.28         +1.60           FLSpBV         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.26         +0.38         +0.51         +0.64           FLSpBV         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.26         +0.38         +0.51         +0.64           FLSp1V         -0.75         -0.60         -0.45         -0.30         -0.15         1.50         +0.15         +0.30         +0.45         +0.60         +0.75           FLSp2V         -0.90         -0.72         -0.54         -0.36         -0.18         1.80         +0.18         +0.36         +0.54         +0.72         +0.90           FLSp3V         -1.09         -0.87         -0.65         -0.44         -0.22         2.18         +0.22         +0.44         +0.65         +0.87         +1.09           FLSp4V         -1.20         -0.96         -0.72         -0.48         -0.24         2.40         +0.24         +0.48         +0.72         +0.96         +	FLSp3	-1.45	-1.16	-0.87	-0.58	-0.29	2.90	+0.29	+0.58	+0.87	+1.16	+1.45
FLSpBV         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.26         +0.38         +0.51         +0.64           FLSpIV         -0,75         -0,60         -0,45         -0,30         -0,15         1.50         +0.15         +0.30         +0.45         +0.60         +0.75           FLSp2V         -0,90         -0,72         -0,54         -0,36         -0,18         1.80         +0.18         +0.36         +0.54         +0.72         +0.90           FLSp3V         -1,09         -0,87         -0,65         -0,44         -0,22         2.18         +0.24         +0.48         +0.72         +0.90           FLSp4V         -1,20         -0,96         -0,72         -0,48         -0,24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20	FLSp4	-1.60	-1.28	-0.96	-0.64	-0.32	3.20	+0.32	+0.64	+0.96	+1.28	+1.60
FLSpBV         -0.64         -0.51         -0.38         -0.26         -0.13         1.28         +0.13         +0.26         +0.38         +0.51         +0.64           FLSp1V         -0,75         -0,60         -0,45         -0,30         -0,15         1.50         +0.15         +0.30         +0.45         +0.60         +0.75           FLSp2V         -0,90         -0,72         -0,54         -0,36         -0,18         1.80         +0.18         +0.36         +0.54         +0.72         +0.90           FLSp3V         -1,09         -0,87         -0,65         -0,44         -0,22         2.18         +0.24         +0.44         +0.65         +0.87         +1.09           FLSp4V         -1,20         -0,96         -0,72         -0,48         -0,24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20												
FLSp1V         -0,75         -0,60         -0,45         -0,30         -0,15         1.50         +0.15         +0.30         +0.45         +0.60         +0.75           FLSp2V         -0,90         -0,72         -0,54         -0,36         -0,18         1.80         +0.18         +0.36         +0.54         +0.72         +0.90           FLSp3V         -1,09         -0,87         -0,65         -0,44         -0,22         2.18         +0.22         +0.44         +0.65         +0.87         +1.09           FLSp4V         -1,20         -0,96         -0,72         -0,48         -0,24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20	FLSpBV	-0.64	-0.51	-0.38	-0.26	-0.13	1.28	+0.13	+0.26	+0.38	+0.51	+0.64
FLSp2V         -0,90         -0,72         -0,54         -0,36         -0,18         1.80         +0.18         +0.36         +0.54         +0.72         +0.90           FLSp3V         -1,09         -0,87         -0,65         -0,44         -0,22         2.18         +0.22         +0.44         +0.65         +0.87         +1.09           FLSp4V         -1,20         -0,96         -0,72         -0,48         -0,24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20	FLSp1V	-0,75	-0.60	-0.45	-0,30	-0,15	1.50	+0.15	+0.30	+0.45	+0.60	+0.75
FLSp3V         -1,09         -0,87         -0,65         -0,44         -0,22         2.18         +0.22         +0.44         +0.65         +0.87         +1.09           FLSp4V         -1,20         -0,96         -0,72         -0,48         -0,24         2.40         +0.24         +0.48         +0.72         +0.96         +1.20	FLSp2V	-0,90	-0,72	-0,54	-0,36	-0,18	1.80	+0.18	+0.36	+0.54	+0.72	+0.90
FLSp4V -1,20 -0,96 -0,72 -0,48 -0,24 2.40 +0.24 +0.48 +0.72 +0.96 +1.20	FLSp3V	-1,09	-0.87	-0.65	-0.44	-0.22	2.18	+0.22	+0.44	+0.65	+0.87	+1.09
	FLSp4V	-1,20	-0.96	-0.72	-0,48	-0.24	2.40	+0.24	+0.48	+0.72	+0.96	+1.20
	L											

**B** 

4A

	-5	-4	-3	-2	-1	BASE	+1	+2	+3	+4	+5
	-50%	-40%	-30%	-20%	-10%		+10%	+20%	+30%	+40%	+50%
FCSpB	-0.80	-0.64	-0.48	-0.32	-0.16	1.60	+0.16	+0.32	+0.48	+0.64	+0.80
FCSp1	-0.95	-0.76	-0.57	-0.38	-0.19	1.90	+0.19	+0.38	+0.57	+0.76	+0.95
FCSp2	-1.15	-0.92	-0.69	-0.46	-0.23	2.30	+0.23	+0.46	+0.69	+0.92	+1.15
FCSp3	-1.40	-1.12	-0.84	-0.56	-0.28	2.80	+0.28	+0.56	+0.84	+1.12	+1.40
ECSp4	-1.60	-1.28	-0.96	-0.64	-0.32	3.20	+0.32	+0.64	+0.96	+1.28	+1.60
10001	1.00	1.20	0.00	0.01	0.02	0.20	10.02			1.20	1.00
ECSpBV	-0.60	-0.48	-0.36	-0.24	-0.12	1.20	+0.12	+0.24	+0.36	+0.48	+0.60
ECSp1V	-0.72	-0.57	-0.43	-0.29	-0.14	1.43	+0.14	+0.29	+0.43	+0.57	+0.72
ECSp2V	-0.87	-0.69	-0.52	-0.35	-0.17	1.73	+0.17	+0.35	+0.52	+0.69	+0.87
ECSp2V	-1.05	-0.84	-0.63	-0.42	-0.21	2.10	+0.21	+0.42	+0.63	+0.84	+1.05
ECSp4V	-1.00	-0.96	-0.72	-0.48	-0.24	2.40	+0.24	+0.48	+0.72	+0.96	+1.00
roopri	1.20	0,00	0.72	0.10	0.21	2.10	.0.21	.0.10		.0.00	1.20
ESSoB	-0.85	-0.68	-0.51	-0.34	-0.17	1.70	+0.17	+0.34	+0.51	+0.68	+0.85
ESSp1	-1.00	-0.80	-0.60	-0.40	-0.20	2.00	+0.20	+0.40	+0.60	+0.80	+1.00
ESSp2	-1.15	-0.92	-0.69	-0.46	-0.23	2.00	+0.23	+0.46	+0.69	+0.92	+1.15
FSSp2	-1.10	-1.04	-0.78	-0.52	-0.26	2.60	+0.26	+0.52	+0.78	+1.04	+1.30
ESSn4	-1.50	-1.04	-0.70	-0.60	-0.20	3.00	+0.20	+0.02	+0.70	+1.04	+1.50
10004	-1.50	-1.20	-0.50	-0.00	-0.50	5.00	40.00	+0.00	+0.50	±1.20	+1.50
ESSoBV/	0.64	0.51	0.38	0.26	0.13	1 28	+0.13	+0.26	+0.38	+0.51	+0.64
ESCo1V	-0.04	-0.51	-0.30	-0.20	-0.15	1.20	+0.15	+0.20	+0.30	+0.51	+0.04
ESSo2V	-0.75	-0.00	-0.45	-0.30	-0.15	1.30	+0.15	+0.30	+0.45	+0.60	+0.75
FSSp2V FSSp2V	-0.07	-0.09	-0.52	-0.35	-0.17	1.73	+0.17	+0.35	+0.52	+0.09	+0.07
FSSp3V FSSp4V	-0.90	-0.70	-0.59	-0.39	-0.20	1.95	+0.20	+0.39	+0.59	+0.70	+0.90
FSSp4V Spine with abongo	-1.13	-0.90	-0.00	-0.45	-0.25	2.20	+0.23	+0.45	+0.00	+0.90	+1.15
Spins with change	0 75	0.60	0.45	0.20	0.45	4 50	10.45	.0.20	10.45	10.00	10.75
(F)CUSpb	-0.75	-0.00	-0.45	-0.30	-0.15	1.50	+0.15	+0.30	+0.45	+0.00	+0.75
(F)CUSp1	-0.05	-0.00	-0.51	-0.34	-0.17	1.70	+0.17	+0.34	+0.51	+0.00	+0.05
(F)CUSp2	-1.00	-0.80	-0.60	-0.40	-0.20	2.00	+0.20	+0.40	+0.60	+0.80	+1.00
(F)CUSp3	-1.20	-0.96	-0.72	-0.48	-0.24	2.40	+0.24	+0.48	+0.72	+0.96	+1.20
(F)CUSp4	-1.45	-1.10	-0.07	-0.50	-0.29	2.90	+0.29	+0.50	+0.07	+1.10	+1.45
(E)CUC+R)/	0.57	0.45	0.24	0.02	0.14	4.42	10.44	.0.02	10.24	10.45	.0.57
(F)CUSpBV	-0.57	-0.45	-0.34	-0.23	-0.11	1.13	+0.11	+0.23	+0.34	+0.45	+0.57
(F)CUSp1V	-0.64	-0.51	-0.38	-0.26	-0.13	1.20	+0.13	+0.26	+0.38	+0.51	+0.64
(F)CUSp2V	-0.75	-0.60	-0.45	-0.30	-0.15	1.50	+0.15	+0.30	+0.45	+0.60	+0.75
(F)CUSp3V	-0.90	-0.72	-0.54	-0.36	-0.18	1.80	+0.18	+0.36	+0.54	+0.72	+0.90
(F)CUSp4V	-1.09	-0.87	-0.65	-0.44	-0.22	2.18	+0.22	+0.44	+0.65	+0.87	+1.09
(E)(0) (C= D	0.05	0.00	0.54	0.04	0.47	4 70	.0.47	.0.04	.0.54	.0.00	.0.05
(F)CLSpB	-0.85	-0.68	-0.51	-0.34	-0.17	1.70	+0.17	+0.34	+0.51	+0.68	+0.85
(F)CLSp1	-1.00	-0.80	-0.60	-0.40	-0.20	2.00	+0.20	+0.40	+0.60	+0.80	+1.00
(F)CLSp2	-1.20	-0.96	-0.72	-0.48	-0.24	2.40	+0.24	+0.48	+0.72	+0.96	+1.20
(F)CLSp3	-1.45	-1.16	-0.87	-0.58	-0.29	2.90	+0.29	+0.58	+0.87	+1.16	+1.45
(F)CLSp4	-1.60	-1.28	-0.96	-0.64	-0.32	3.20	+0.32	+0.64	+0.96	+1.28	+1.60
(5)01.0.514	0.04	0.54	0.00	0.00	0.10	4.00	.0.10	.0.00		.0.54	.0.01
(F)CLSpBV	-0.64	-0.51	-0.38	-0.26	-0.13	1.28	+0.13	+0.26	+0.38	+0.51	+0.64
(F)CLSp1V	-0.75	-0.60	-0.45	-0.30	-0.15	1.50	+0.15	+0.30	+0.45	+0.60	+0.75
(F)CLSp2V	-0.90	-0.72	-0.54	-0.36	-0.18	1.80	+0.18	+0.36	+0.54	+0.72	+0.90
(F)CLSp3V	-1.09	-0.87	-0.65	-0.44	-0.22	2.18	+0.22	+0.44	+0.65	+0.87	+1.09
(F)CLSp4V	-1.20	-0.96	-0.72	-0.48	-0.24	2.40	+0.24	+0.48	+0.72	+0.96	+1.20
(5)000 0	0.05	0.00	0.54	0.01	0.47	4 70	.0.47	.0.01	.0.51	.0.00	.0.05
(F)CCSpB	-0.85	-0.68	-0.51	-0.34	-0.17	1.70	+0.17	+0.34	+0.51	+0.68	+0.85
(F)CCSp1	-1.00	-0.80	-0.60	-0.40	-0.20	2.00	+0.20	+0.40	+0.60	+0.80	+1.00
(F)CCSp2	-1.15	-0.92	-0.69	-0.46	-0.23	2.30	+0.23	+0.46	+0.69	+0.92	+1.15
(F)CCSp3	-1.40	-1.12	-0.84	-0.56	-0.28	2.80	+0.28	+0.56	+0.84	+1.12	+1.40
(F)CCSp4	-1.60	-1.28	-0.96	-0.64	-0.32	3.20	+0.32	+0.64	+0.96	+1.28	+1.60
(5)000 514	0.04	0.54	0.00	0.00	0.10	4.00	.0.10	.0.00		.0.51	
(F)CCSpBV	-0.64	-0.51	-0.38	-0.26	-0.13	1.28	+0.13	+0.26	+0.38	+0.51	+0.64
(F)CCSp1V	-0.75	-0.60	-0.45	-0.30	-0.15	1.50	+0.15	+0.30	+0.45	+0.60	+0.75
(F)CCSp2V	-0.87	-0.69	-0.52	-0.35	-0.17	1.73	+0.17	+0.35	+0.52	+0.69	+0.87
(F)CCSp3V	-1.05	-0.84	-0.63	-0.42	-0.21	2.10	+0.21	+0.42	+0.63	+0.84	+1.05
(F)CCSp4V	-1.20	-0.96	-0.72	-0.48	-0.24	2.40	+0.24	+0.48	+0.72	+0.96	+1.20

4C

	-5	-4	-3	-2	-1	BASE	+1	+2	+3	+4	+5
	-50%	-40%	-30%	-20%	-10%		+10%	+20%	+30%	+40%	+50%
(F)CSSpB	-0.80	-0.64	-0.48	-0.32	-0.16	1.60	+0.16	+0.32	+0.48	+0.64	+0.80
(F)CSSp1	-0.95	-0.76	-0.57	-0.38	-0.19	1.90	+0.19	+0.38	+0.57	+0.76	+0.95
(F)CSSp2	-1.15	-0.92	-0.69	-0.46	-0.23	2.30	+0.23	+0.46	+0.69	+0.92	+1.15
(F)CSSp3	-1.30	-1.04	-0.78	-0.52	-0.26	2.60	+0.26	+0.52	+0.78	+1.04	+1.30
(F)CSSp4	-1.50	-1.20	-0.90	-0.60	-0.30	3.00	+0.30	+0.60	+0.90	+1.20	+1.50
(F)CSSpBV	-0.60	-0.48	-0.36	-0.24	-0.12	1.20	+0.12	+0.24	+0.36	+0.48	+0.60
(F)CSSp1V	-0.72	-0.57	-0.43	-0.29	-0.14	1.43	+0.14	+0.29	+0.43	+0.57	+0.72
(F)CSSp2V	-0.87	-0.69	-0.52	-0.35	-0.17	1.73	+0.17	+0.35	+0.52	+0.69	+0.87
(F)CSSp3V	-0.98	-0.78	-0.59	-0.39	-0.20	1.95	+0.20	+0.39	+0.59	+0.78	+0.98
(F)CSSp4V	-1.13	-0.90	-0.68	-0.45	-0.23	2.25	+0.23	+0.45	+0.68	+0.90	+1.13
Spin Combination v	with char	ige of po	sition an	d no cha	nge of fo	ot					
(F)CoSpB	-0.75	-0.60	-0.45	-0.30	-0.15	1.50	+0.15	+0.30	+0.45	+0.60	+0.75
(F)CoSp1	-0.85	-0.68	-0.51	-0.34	-0.17	1.70	+0.17	+0.34	+0.51	+0.68	+0.85
(F)CoSp2	-1.00	-0.80	-0.60	-0.40	-0.20	2,00	+0.20	+0.40	+0.60	+0.80	+1.00
(F)CoSp3	-1.25	-1.00	-0.75	-0.50	-0.25	2.50	+0.25	+0.50	+0.75	+1.00	+1.25
(F)CoSp4	-1.50	-1.20	-0.90	-0.60	-0.30	3.00	+0.30	+0.60	+0.90	+1.20	+1.50
(F)CoSpBV	-0.57	-0.45	-0.34	-0.23	-0.11	1.13	+0.11	+0.23	+0.34	+0.45	+0.57
(F)CoSp1V	-0.64	-0.51	-0.38	-0.26	-0.13	1.28	+0.13	+0.26	+0.38	+0.51	+0.64
(F)CoSp2V	-0.75	-0.60	-0.45	-0.30	-0.15	1.50	+0.15	+0.30	+0.45	+0.60	+0.75
(F)CoSp3V	-0.94	-0.75	-0.56	-0.38	-0.19	1.88	+0.19	+0.38	+0.56	+0.75	+0.94
(F)CoSp4V	-1.13	-0.90	-0.68	-0.45	-0.23	2.25	+0.23	+0.45	+0.68	+0.90	+1.13
Spin Combination	with char	nge of po	sition an	d change	of foot						
(F)CCoSpB	-0.85	-0.68	-0.51	-0.34	-0.17	1.70	+0.17	+0.34	+0.51	+0.68	+0.85
(F)CCoSp1	-1.00	-0.80	-0.60	-0.40	-0.20	2.00	+0.20	+0.40	+0.60	+0.80	+1.00
(F)CCoSp2	-1.25	-1.00	-0.75	-0.50	-0.25	2.50	+0.25	+0.50	+0.75	+1.00	+1.25
(F)CCoSp3	-1.50	-1.20	-0.90	-0.60	-0.30	3.00	+0.30	+0.60	+0.90	+1.20	+1.50
(F)CCoSp4	-1.75	-1.40	-1.05	-0.70	-0.35	3.50	+0.35	+0.70	+1.05	+1.40	+1.75
(F)CCoSpBV	-0.64	-0.51	-0.38	-0.26	-0.13	1.28	+0.13	+0.26	+0.38	+0.51	+0.64
(F)CCoSp1V	-0.75	-0.60	-0.45	-0.30	-0.15	1.50	+0.15	+0.30	+0.45	+0.60	+0.75
(F)CCoSp2V	-0.94	-0.75	-0.56	-0.38	-0.19	1.88	+0.19	+0.38	+0.56	+0.75	+0.94
(F)CCoSp3V	-1.13	-0.90	-0.68	-0.45	-0.23	2.25	+0.23	+0.45	+0.68	+0.90	+1.13
(F)CCoSp4V	-1.32	-1.05	-0.79	-0.53	-0.26	2.63	+0.26	+0.53	+0.79	+1.05	+1.32
Step Sequences											
StSqB	-0.75	-0.60	-0.45	-0.30	-0.15	1.50	+0.15	+0.30	+0.45	+0.60	+0.75
StSq1	-0.90	-0.72	-0.54	-0.36	-0.18	1.80	+0.18	+0.36	+0.54	+0.72	+0.90
StSq2	-1.30	-1.04	-0.78	-0.52	-0.26	2.60	+0.26	+0.52	+0.78	+1.04	+1.30
StSq3	-1.65	-1.32	-0.99	-0.66	-0.33	3.30	+0.33	+0.66	+0.99	+1.32	+1.65
StSq4	-1.95	-1.56	-1.17	-0.78	-0.39	3.90	+0.39	+0.78	+1.17	+1.56	+1.95
Lifts											
1LiB	-0.70	-0.56	-0.42	-0.28	-0.14	1.40	+0.14	+0.28	+0.42	+0.56	+0.70
1Li1	-0.75	-0.60	-0.45	-0.30	-0.15	1.50	+0.15	+0.30	+0.45	+0.60	+0.75
1Li2	-0.85	-0.68	-0.51	-0.34	-0.17	1.70	+0.17	+0.34	+0.51	+0.68	+0.85
1Li3	-0.95	-0.76	-0.57	-0.38	-0.19	1.90	+0.19	+0.38	+0.57	+0.76	+0.95
1Li4	-1.05	-0.84	-0.63	-0.42	-0.21	2.10	+0.21	+0.42	+0.63	+0.84	+1.05
2LiB	-0.75	-0.60	-0.45	-0.30	-0.15	1,50	+0.15	+0.30	+0.45	+0.60	+0.75
2Li1	-0.95	-0.76	-0.57	-0.38	-0.19	1.90	+0.19	+0.38	+0.57	+0.76	+0.95
2Li2	-1.15	-0.92	-0.69	-0.46	-0.23	2.30	+0.23	+0.46	+0.69	+0.92	+1.15
2Li3	-1.35	-1.08	-0.81	-0.54	-0.27	2.70	+0.27	+0.54	+0.81	+1.08	+1.35
2Li4	-1.55	-1.24	-0.93	-0.62	-0.31	3.10	+0.31	+0.62	+0.93	+1.24	+1.55
3LiB/4LiB	-1.75	-1.40	-1.05	-0.70	-0.35	3.50	+0.35	+0.70	+1.05	+1.40	+1.75
3Li1/4Li1	-1.95	-1.56	-1.17	-0.78	-0.39	3.90	+0.39	+0.78	+1.17	+1.56	+1.95
3Li2/4Li2	-2.15	-1.72	-1.29	-0.86	-0.43	4.30	+0.43	+0.86	+1.29	+1.72	+2.15
3Li3/4Li3	-2.35	-1.88	-1.41	-0.94	-0.47	4.70	+0.47	+0.94	+1.41	+1.88	+2.35
3Li4/4Li4	-2.55	-2.04	-1.53	-1.02	-0.51	5.10	+0.51	+1.02	+1.53	+2.04	+2.55

### Judges Scoring for Kaori Sakamoto 2021 Worlds SP

Ran	k Name					Nation	5	Starting Number	Se	Total gment Score	To Elem Sc	otal ent ore	Total Pr	ogram C Score	omponent (factored)	ſ	Total Deductions
	6 Kaori SAKAMOTO					JPN		36		70.38	36	.14			34.24		0.00
#	Executed Elements	Info	Base Value		GOE	J1	J2	J3	J4	J5	J6	J7	J8	J9		Ref.	Scores of Panel
1	2A		3.30		1.08	3	3	4	3	3	4	3	3	4			4.38
2	3Lze	е	4.72		-0.54	-2	-2	-1	0	0	-1	-1	-2	-1			4.18
3	CCoSp4		3.50		1.05	3	3	3	3	3	3	3	2	3			4.55
4	3F+3T		10.45	x	0.45	1	0	0	2	1	1	2	-1	1			10.90
5	FCSp4		3.20		0.91	2	3	3	3	3	3	2	3	3			4.11
6	StSq3		3.30		1.13	3	4	5	3	4	3	3	3	4			4.43
7	LSp4		2.70		0.89	3	4	4	3	3	4	3	3	3			3.59
			31.17														36.14
	Program Components				Factor												
	Skating Skills				0.80	8.25	8.75	8.75	9.00	8.75	9.00	8.75	8.75	9.00			8.82
	Transitions				0.80	8.00	7.75	8.25	8.75	8.00	8.50	8.50	8.25	8.50			8.29
	Performance				0.80	8.25	8.75	8.50	8.75	8.25	8.75	8.50	8.50	9.00			8.57
	Composition				0.80	8.25	8.50	8.50	8.75	8.50	8.75	8.50	8.50	9.00			8.57
	Interpretation of the Music				0.80	8.25	8.25	8.50	9.00	8.50	8.75	8.25	8.75	8.75			8.54
	Judges Total Program Con	npone	ent Score	(fac	tored)												34.24
	Deductions:																0.00

Technical Score + PCS – Deductions = Total SP Score

Rank	Name					Nation	S	tarting lumber	Seg	Total ment Score	Tot Eleme Sco	tal nt re	Total Pr	ogram Co Score (	mponent factored)	C	Total Deductions
23	Natasha McKAY					GBR		2		95.31	43.	69			51.62		0.00
#	Executed Elements	Info	Base Value		GOE	J1	J2	J3	J4	J5	J6	J7	J8	J9		Ref.	Scores of Panel
1	3Lo+2T		6.20		0.84	1	2	2	1	1	2	2	2	3			7.04
2	35		4.30		1.11	3	2	3	2	2	3	3	3	2			5.41
3	3Loq	q	4.90		-0.35	-1	0	-1	-1	0	-2	-1	-1	0			4.55
4	1A<<	<<	0.00		0.00	-	-	-	-	-	-	-	-	-			0.00
5	CSp4		2.60		0.30	1	1	1	1	1	2	1	1	2			2.90
6	ChSq1		3.00		0.64	0	1	1	2	2	2	2	1	0			3.64
7	3Sq+2T+2Lo<	<	7.66	х	-1.35	-2	-5	-4	-3	-2	-4	-4	-2	-3			6.31
8	2A<	<	2.90	х	-1.32	-5	-5	-5	-5	-5	-5	-5	-5	-5			1.58
9	FSSp4		3.00		0.21	0	1	1	1	1	1	-1	1	0			3.21
10	2Lz		2.31	х	0.09	0	1	0	0	1	0	0	1	1			2.40
11	StSq2		2.60		0.15	1	1	0	1	1	0	1	0	0			2.75
12	CCoSp4		3.50		0.40	1	0	1	2	2	1	0	1	2			3.90
			42.97														43.69
	Program Components				Factor												

### **Under rotated jumps:**

q indicates a jump that is up to ¼ turn short. Base value is unchanged, but GOE deduction

< Caret indicates an under-rotated jump (<sup>1</sup>/<sub>4</sub> to <sup>1</sup>/<sub>2</sub> turn short) and skater receives points in sections 1A, 2A, 3A, 4A (See pages 13-14)

<< indicates a downgraded jump (more than <sup>1</sup>/<sub>2</sub> turn short) and skater receives points for same jump but one revolution less **Edge problems with Flips and Lutzs:** 

Flips/Lutzs: The flip and the lutz are identical except for the edge on which the skater is leaning when he/she takes off. (Outside edge=lutz, inside edge=flip)

e indicates the jump took off on the wrong edge, and the skater receives the points in sections 1A, 2A, 3A, 4A (See pages 12-13)

If skater receives both < and e, skater receives the points in the bottom 2 rows of sections 1A, 2A, 3A, 4A (See pages 12-13)

! indicates the jump took off on an unclear edge, and the skater receives Base Value, with GOE deductions

X denotes a 10% bonus

# Ladies and Men's Short Program Required Elements

### Men

- a) Double or triple Axel Paulsen;
- b) Triple or quadruple jump;

c) Jump combination consisting of a double jump and a triple jump or two triple jumps or a quadruple jump and double jump or a triple jump;

d) Flying spin;

- e) Camel spin or sit spin with only one change of foot;
- f) Spin combination with only one change of foot;
- g) Step sequence fully utilizing the ice surface

### Ladies

- a) Double or triple Axel Paulsen;
- b) Triple jump;
- c) Jump combination consisting of a double jump and a triple jump or two triple jumps;
- d) Flying spin;
- e) Layback/sideways leaning spin or sit or camel spin without change of foot;
- f) Spin combination with only one change of foot;
- g) Step sequence fully utilizing the ice surface.

# Ladies and Men's Long Program Required Elements

- a) Maximum of 7 jump elements (one of which must be an Axel type jump);
- b) Maximum of 3 spins, one of which must be a spin combination, one must be a flying spin or a spin with a flying entrance and one must be a spin with only one position;
- c) Maximum of 1 step sequence;
- d) Maximum of 1 choreographic sequence

### Pairs Short Program Required Elements

- a) 1 side by side jump (double or triple)1 throw jump (any double or triple)
- b) 1 throw jump (double or triple)
- c) 1 lift
- d) 1 death spiral
- e) 1 twist (double or triple)
- f) 1 side-by-side combination spin
- g) 1 step sequence

### Pairs Long Program Required Elements

- a) 2 side-by-side jumping passes, one in combination or sequence
- b) 2 throw jumps (different types, any number of rotations)
- c) 3 lifts (all from different groups)
- d) 1 death spiral (any type)
- e) 1 twist (any number of rotations)
- f) 1 pair combination spin
- g) 1 choreographic sequence

# U.S. FIGURE SKATING SCORING GUIDE



# UNDERSTANDING THE INTERNATIONAL JUDGING SYSTEM

Points awarded for a technical score are combined with points awarded for five components, and deductions are taken for falls and rule violations. The technical score is added to the program components score, and the skater with the highest total score is declared the winner. On Live Scoring presented by Prudential, users can see a live feed of an athlete's technical score as it is calculated during the program. The program components score will be added at the conclusion of the performance.

### **TECHNICAL SCORE**

- Each jump element is assigned a base value (Listed on page 2). Spins and step/ choreographic sequences have levels of difficulty on which the base values are based.
- During the program, when a skater executes an element, the technical panel identifies each element and determines its level of difficulty (Level Base to Level 4).
- Once the base value is determined, the judges assign the element a grade of execution (GOE) within a range of +5 to -5, which is added to or deducted from the base value.
- A bonus is added to the base value of jumps that are executed during the second half of a performance.
- The sum of all elements with the grade of execution forms the technical score.

### **PROGRAM COMPONENTS**

Program components are awarded points on a scale from 0.25 to 10 (with increments of 0.25) for five program components to grade the overall presentation. The five components are:

- Skating Skills: Overall skating quality including edge control and flow over the ice surface (edges, steps, turns, speed, etc.).
- Transitions: The varied and intricate footwork, positions and movements that link all elements.
- Performance: The involvement of the skater(s) physically, emotionally and intellectually as they deliver the intent of the music and composition.
- Composition: Intentional and/or original arrangement of all types of movements according to the principles musical phrase, space, pattern and structure.
- Interpretation of the Music: The personal, creative and genuine translation of the rhythm, character and content of the music to movement on ice.

### SAMPLE PROTOCOL

### KEY

Executed Elements

- 1. 4Lz = Quadruple Lutz
- 2. 4F = Quadruple flip
- 3. 4T = Quadruple toe loop
- 4. 3A = Triple Axel
- 5. CCSp4 = Level 4 camel spin with change of foot
- 6. StSq4 = Level 4 step sequence
- 7. 4T + 3T = Quadruple toe loop-triple toe loop combination
- 8. 3Lz + 3T = Triple Lutz-triple toe loop combination
- 9. 3F + 1Eu + 3S = Triple flip-euler-triple toe loop combination
- 10. ChSq1 = Choreographic sequence confirmed
- 11. FCCoSp4 = Level 4 combination spin with change of foot and flying entry
- 12. CCoSp4 = Level 4 combination spin with change of foot

x = Element performed in the second half of a skater's program. The base value is multiplied by 1.1.

### NATHAN CHEN - FREE SKATE ISU WORLD FIGURE SKATING CHAMPIONSHIPS 2019

World Championships 2019	

Rank	Name			Nation	Starl Num	ing ber		To Segm Sco	otal ent ore		Tot Eleme Sco	al nt re	Total Program Component Score (factored)	Tota Deductions
1	Nathan CHEN			USA		23		216.	02		121.2	4	94.78	0.00
# Exec Elem	cuted nents	Info Base Value	GOE	J1	J2	J3	J4	J5	J6	J7	<b>J</b> 8	J9		Ref Scores o Pane
1 4Lz		11.50	4.76	4	4	4	4	4	5	4	4	5		16.26
2 4F		11.00	2.04	2	1	1	3	1	3	2	2	2		13.04
3 4T		9.50	3.39	3	4	4	4	4	5	3	3	3		12.89
4 3A		8.00	2.97	4	4	4	4	3	5	3	4	3		10.97
5 CCS	p4	3.20	1.23	2	3	5	4	4	5	4	4	3		4.43
6 StSq	4	3.90	1.67	3	5	5	4	4	4	4	5	4		5.5
7 4T+3	зт	15.07 X	3.39	4	4	4	3	3	4	4	3	3		18.46
B 3Lz+	-3T	11.11 X	2.11	3	4	4	4	2	4	4	3	3		13.22
9 3F+1	Eu+3S	11.11 X	0.30	0	1	1	1	0	2	0	1	0		11.4
0 ChS	q1	3.00	2.14	2	4	4	4	4	5	5	5	4		5.14
1 FCC	oSp4	3.50	1.35	2	5	5	4	3	5	4	4	2		4.8
2 CCo	Sp4	3.50 94.39	1.50	2	5	5	4	4	5	4	5	3		5.0 121.2
rogram	Components	1	Factor											
Skati	ina Skills		2.00	9.75	9.50	9.50	9.50	9.25	9.75	9.50	9.50	9.25		9.50
Tran	sitions		2.00	9.50	9.00	9.50	9.25	9.00	9.75	8.75	9.25	9.00		9.2
Perfo	ormance		2.00	9.50	9.50	9.50	9.75	9.75	10.00	9.00	9.75	9.50		9.6
Com	position		2.00	9.50	9.25	9.75	9.50	9.50	9.75	9.25	9.75	9.25		9.5
Inter	pretation of the Music		2.00	9.50	9.75	9.50	9.50	9.50	9.75	9.00	9.75	9.50		9.5
Judg	es Total Program Compo	nents Score (fac	tored)											94.78
Deductio	ns:													0.0

GOE = Each element is marked by the judges using a seven-mark "grade of execution" (GOE) scale: -5,-4,-3, -2, -1, 0, +1, +2, +3, +4, +5. The judges' grade of execution is added to the base value of the element to determine the skater's score for that element (explained on Page 18).

Program components = In addition to the technical evaluation, the judges award points on a scale from 0.25 to 10.00, with increments of 0.25 for each program component to express the overall presentation (explained on Page 18).

# U.S. FIGURE SKATING SCORING GUIDE



SINGLES AND PAIRS - SPINS AND STEP SEQUENCES										
ELEMENT	CODE	LB (V)	L1 (V)	L2 (V)	L3 (V)	L4 (V)				
Upright Spin	USp	1.0	1.2	1.5	1.9	2.4				
Layback Spin	LSp	1.2	1.5	1.9	2.4	2.7				
Camel Spin	CSp	1.1	1.4	1.8	2.3	2.6				
Sit Spin	SSp	1.1	1.3	1.6	2.1	2.5				
Upright Spin w/ Flying Entry	FUSp	1.5 (1.13)	1.7 (1.28)	2.0 (1.50)	2.4 (1.80)	2.9 (2.18)				
Layback Spin w/ Flying Entry	FLSp	1.7 (1.28)	2.0 (1.50)	2.4 (1.80)	2.9 (2.18)	3.2 (2.40)				
Camel Spin w/ Flying Entry	FCSp	1.6 (1.20)	1.9 (1.43)	2.3 (1.73)	2.8 (2.10)	3.2 (2.40)				
Sit Spin w/ Flying Entry	FSSp	1.7 (1.28)	2.0 (1.50)	2.3 (1.73)	2.6 (1.95)	3.0 (2.25)				
Upright Spin w/Change of Foot	CUSp	1.5 (1.13)	1.7 (1.28)	2.0 (1.50)	2.4 (1.80)	2.9 (2.18)				
Layback Spin w/Change of Foot	CLSP	1.7 (1.28)	2.0 (1.50)	2.4 (1.80)	2.9 (2.18)	3.2 (2.40)				
Camel Spin w/ Change of Foot	CCSp	1.7 (1.28)	2.0 (1.50)	2.3 (1.73)	2.8 (2.10)	3.2 (2.40)				
Sit Spin w/ Change of Foot	CSSp	1.6 (1.20)	1.9 (1.43)	2.3 (1.73)	2.6 (1.95)	3.0 (2.25)				
Combo Spin w/ no Change of Foot	CoSp	1.5 (1.13)	1.7 (1.28)	2.0 (1.50)	2.5 (1.88)	3.0 (2.25)				
Combo Spin w/ Change of Foot	CCoSp	1.7 (1.28)	2.0 (1.50)	2.5 (1.88)	3.0 (2.25)	3.5 (2.63)				
Step Sequence	StSq	1.5	1.8	2.6	3.3	3.9				
Choreographic Sequence	ChSq	3.0	-	-	-	-				

PAIRS - LIFTS, DEATH SPIRALS, PAIRS SPINS AND TWIST LIFTS										
ELEMENT	CODE	LB (V)	L1 (V)	L2 (V)	L3 (V)	L4 (V)				
Group 1 Lift	1Li	1.4	1.5	1.7	1.9	2.1				
Group 2 Lift	2Li	1.5	1.9	2.3	2.7	3.1				
Group 3/Group 4 Lifts	3Li/4Li	3.5	3.9	4.3	4.7	5.1				
Group 5 Lift — Toe and Step In	5TLi/SLi	4.6	5.0	5.4	5.8	6.2				
Group 5 Lift — Backward Lasso	5BLi	5.0	5.4	5.8	6.2	6.5				
Group 5 Lift — Axel and Reverse Lasso	5ALi/5RLi	5.4	5.8	6.2	6.6	7.0				
Forward Inside/Backward Inside Death Spiral	FiDs/BiDs	2.6	2.9	3.2	3.5	3.8				
Forward Outside/Backward Outside Death Spiral	FoDs/BoDs	3.1	3.5	3.9	4.3	4.7				
Pairs Spin	PSp	1.7	2.0	2.5	3.0	3.5				
Pairs Spin Combination	PCoSp	2.5 (1.88)	3.0 (2.25)	3.5 (2.63)	4.0 (3.0)	4.5 (3.38)				
Single Twist Lift	1Tw	0.9	1.1	1.3	1.5	1.7				
Double Twist Lift	2Tw	2.6	2.8	3.0	3.2	3.4				
Triple Twist Lift	3Tw	4.8	5.1	5.4	5.7	6.0				
Quad Twist Lift	4Tw	6.4	6.8	7.2	7.6	8.0				

### ICE DANCE - SPINS, TWIZZLES, LIFTS AND STEP SEQUENCES

ELEMENTS	CODE	LB	L1	L2	L3	L4
Finnstep Section 1	1FS	4.00	5.35	5.85	6.60	7.35
Spin/Spin Combination	Sp/CoSp	1.80	3.75	4.50	5.25	6.00
Stationary Lift / Straight Line Lift / Curve Lift / Rotational Lift	StaLi/SILi/CuLi/RoLi	1.00	3.05	3.80	4.55	5.30
Set of Sequential Twizzles Lady / Man	SqTwL+SqTwM	0.80	2.42	2.67	3.05	3.42
Set of Synchronized Twizzles Lady / Man	SyTwL+SyT2M	0.80	2.42	2.67	3.05	3.42
Pattern Dance Type Step Sequence Lady / Man	PStL+PStM	2.00	3.23	3.48	3.85	4.23
One Foot Step Sequence Lady / Man	OFStL+OFStM	0.80	2.42	2.67	3.05	3.42
Diagonal / Midline / Circular / Serpentine Step Sequence	DiSt/MiSt/CiSt/SeSt	4.00	6.45	6.95	7.70	8.45
Choreographic Character Step Sequence	ChSt	1.10	-	-	-	-
Choreographic Dance Lift / Twizzling Movement	ChLi/ChTw	1.10	-	-	-	-
Choreographic Spinning Movement / Sliding Movements	ChSp/ChSt	1.10	-	-	-	-

### SCALE OF VALUES (SOV)

The scale of values (SOV) assigns a specific base value to each technical element reflective of its difficulty. A group of experts, including experienced skaters and coaches, determined the base values for each element, most of which are listed above.

Jump and throw elements include one base value for full rotation and an additional base value for under-rotation or an edge error. Flips and Lutz jumps have a third base value for under-rotation and an edge error. Non-jumping elements have five levels (LB, L1, L2, L3, L4) that correlate with five base values and, in some cases, a V value. The values and levels are determined by edges used, number of rotations, etc. A judge still must determine a GOE for whichever element and level is called.

# THINGS TO NOTE

1) Full rotation: signs "q", "<" and "<<" indicate an error and are listed in the SOV table. A jump with a sign "q" keeps the full original base value of the jump. A jump with a sign "<<" is evaluated with the value of the same jump with one less revolution.

2) Correct take-off edge in F/Lz: signs "e" and "!" indicate an error. The base values of the jumps with the sign "e" are listed in the SOV table. A jump with the sign "!" keeps the full original base value of the jump. If both signs "<" and "e" are applied for the same jump, the base values are listed in the SOV table.

### JUMPS (PAIRS)

Both partners must fulfill requirements above (with the same consequences if these requirements are not fulfilled).

### SPINS

For flying spins (with no change of foot and only one position) a clear visible jump is required. The sign "V" indicates that this requirement was not met.

All spins with a change of foot must have three revolutions on each foot. In the short program, a spin that does not meet this requirement will get no value. In the free skate, the sign "V" indicates that this requirement was not met.

A spin in one position with change of foot must have two revolutions in a basic position on each foot. In the short program, a spin that doesn't meet this requirement will get no value. In the free skate, the sign "V" indicates that this requirement was not met.

The base values of spins with the sign "V" and the base values of spin combinations and pair spin combinations with only two basic positions are listed in parentheses in the applicable columns of the SOV table.

SINGLES AND PAIRS - JUMPS								
ELEMENT	CODE	SOV	< or e	< and e				
Double Toe Loop	2T	1.3	1.04	-				
Double Salchow	2S	1.3	1.04	-				
Double Loop	2Lo	1.7	1.36	-				
Double Flip	2F	1.8	1.44	1.08				
Double Lutz	2Lz	2.1	1.68	1.26				
Double Axel	2A	3.3	2.64	-				
Triple Toe Loop	3T	4.2	3.36	-				
Triple Salchow	3S	4.3	3.44	-				
Triple Loop	3Lo	4.9	3.92	-				
Triple Flip	3F	5.3	4.24	3.18				
Triple Lutz	3Lz	5.9	4.72	3.54				
Triple Axel	3A	8.0	6.40	-				
Quad Toe Loop	4T	9.5	7.60	-				
Quad Salchow	4S	9.7	7.76	-				
Quad Loop	4Lo	10.5	8.40	-				
Quad Flip	4F	11.0	8.80	6.60				
Quad Lutz	4Lz	11.5	9.20	6.90				
Quad Axel	4A	12.5	10.00	-				

PAIRS - THROWS		-	
ELEMENTS	CODE	SOV	<
Double Toe Loop	2TTh	2.5	1.88
Double Salchow	2STh	2.5	1.88
Double Loop	2LoTh	2.8	2.10
Double Flip	2FTh	3.0	2.25
Double Lutz	2LzTh	3.0	2.25
Double Axel	2ATh	4.0	3.00
Triple Toe Loop	3TTh	4.4	3.30
Triple Salchow	3STh	4.4	3.30
Triple Loop	3LoTh	5.0	3.75
Triple Flip	3FTh	5.3	3.98
Triple Lutz	3LzTh	5.3	3.98
Triple Axel	3ATh	6.0	4.50
Quad Toe Loop	4TTh	6.5	4.88
Quad Salchow	4STh	6.5	4.88
Quad Loop	4LoTh	7.0	5.25
Quad Flip	4FTh	7.5	5.63
Quad Lutz	4LzTh	7.5	5.63