FÉDÉRATION
INTERNATIONALE
DE NATATION

WATER IS OUR WORLD

FINAL REPORT OF THE FINA AD HOC COMMITTEE ON ARTISTIC SWIMMING DEGREES OF DIFFICULTY

2014 - 2017

Final Report

Ad Hoc Committee on Degrees of Difficulty
2014 - 2017

Miwako Homma, Judith McGowan, Barbara McNamee, Jennifer Gray,

Mikael Begon, Koji Ito and Sonia Hercowitz

Ad Hoc Committee on Degrees of Difficulty

FINA TECHNICAL SYNCHRONISED SWIMMING COMMITTEE

SEPTEMBER 2017

Table of Contents

Acknowledgements

This project involved extensive work, research and dedication. I express my deepest appreciation to all those who helped me in completing this report.

First, I am thankful to FINA for its financial support and to FINA TSSC for providing the necessary guidance concerning the implementation of this project.

Second, I express my gratitude towards the members of this Ad Hoc Committee—Judith McGowan (Original Member and Editor of Interim Report 2015), Barbara McNamee (Technical Editor of Interim Report 2015), Jennifer Gray (Original Member), Mikael Begon (Biomechanist), Koji Ito (Biomechanist) and Sonia Hercowitz (FINA TSSC Coach Sub-Committee)—for their kind cooperation and encouragement that helped me complete this project. Without their excellent knowledge and experience, the project would have had inferior outcomes; hence, their support has been essential.

Yours faithfully,

Miwako Homma

Chairman of FINA Ad Hoc Committee on Degrees of Difficulty (2014-2017)
FINA Technical Synchronized Swimming Committee member
September 2017

1. Summary of *Interim Report July 2015*

- Degree of Difficulty Meeting (January 17-22, 2015, Windsor Meade, USA)

1.1 Background

The *Final Report of the Ad Hoc Committee on Degrees of Difficulty* was presented at the FINA Worldwide Seminar on Synchronized Swimming in 1997 in Bangkok, Thailand. A subsequent meeting was held in Tokyo, Japan to address the degrees of difficulty of the many new figures and especially those using explosive movements and dynamic height. Since the FINA Technical Synchronized Swimming Committee and the synchro world has "lived with" the recommendations of the report for 18 years, it was felt by many that it was now time to review the two reports and to clarify any existing concerns regarding the degrees of difficulty of the FINA figures and elements.

A meeting was held at Windsor Meade of Williamsburg, USA, January 17th– 22nd, 2015. *Interim Report July 2015* was the report of this meeting. Participants at the meeting were:

Miwako Homma, Chairman
Mikael Begon, Biomechanist
Koji Ito, Biomechanist
Jennifer Gray, Original Member
Sonia Hercowitz, TSSC Coaches' Committee
Judith McGowan, Original Member and Editor
Barbara McNamee, Technical Editor

1.2 Process

1.2.1 Survey of subjective difficulty ranking in the current Figures and Elements

Prior to the meeting, a survey was sent out to international coaches and judges to get their difficulty ranking of the current FINA List of Required Figures and the FINA elements. The same survey was given also to Japanese judges and coaches. See Fig. 1 and Fig. 2 for the results. The results of these subjective rankings of the degrees of difficulty were analyzed and the relationship between subjective difficulty ranking and the DD of the figures appears in Fig. 3. These results were a valuable start for the committee's discussions and work.

1.2.2 Key point of this meeting

The committee listed all concerns that needed to be addressed during our meetings. The following concerns were identified.

- Key movements are not valued enough
- The existing formula is okay, but the application of it is not always consistent, especially in pass through movements such as in the Flying Fish
- Judges and coaches do not always interpret things the same way; there is a need for clarity – example speed, rapid, acceleration
- Terminology is too open to interpretation
- Too much "stuff" in free routines with no guidelines for judging
- Often get requests for "how much" to take off for specific errors, no deduction system exists

Initially the committee worked as a group to identify any new transitions, or missing ones, that needed to be included in the committee's work. The group also discussed at length the transitions that seemed peculiar and/or at odds with popular opinion.

1.3 Reviewing the ESSE (Essential Synchro Specific Elements)

The group first reviewed the values of The Essential Elements of Synchronised Swimming (ESSE) which are used to calculate the degree of difficulty of any given transition.
ESSE contains six components:

1. Sculling Proficiency Values (VSP)
2. Center of Gravity and Buoyancy Values (VGB)
3. Kinesthetic and Spatial Perception Values (VKS)
4. Airborne Weight Values (VAW)
5. Water Resistance Values (VWR)
6. Joint Flexibility Values (VJF)

The committee agreed on the following tables, some of which were revised.

#1 Sculling Proficiency Values (VSP)
A sculling proficiency value for sustaining dynamic height was added to the former table.

#2 Center of Gravity and Buoyancy Values (VGB)
How the change in the relationship between the center of gravity and buoyancy affects stability
The former table remained intact.

#3 Kinesthetic and Spatial Perception Values (VKS)
The former table was reformatted and the maximum value was increased from 5 to 7.

#4 Airborne Weight Value (VAW)
The Dynamic Height section and corresponding values were added to the former table.

#5 Values of Water Resistance (VWR)
Formula: Drag = 1/2 x [water density] x [drag coefficient] x [cross sectional area (CSA)] x [speed of the object]^2
The former table was totally revised and a formula was used to arrive at these values.

#6 Joint Flexibility Values (VJF)
Awarded when required action (not initial position) is beyond normal Range of Movement
The values in the former table remained intact.

The ESSE values in these six tables were used to review all transitions and to make any necessary corrections to them.

1.4 Observations

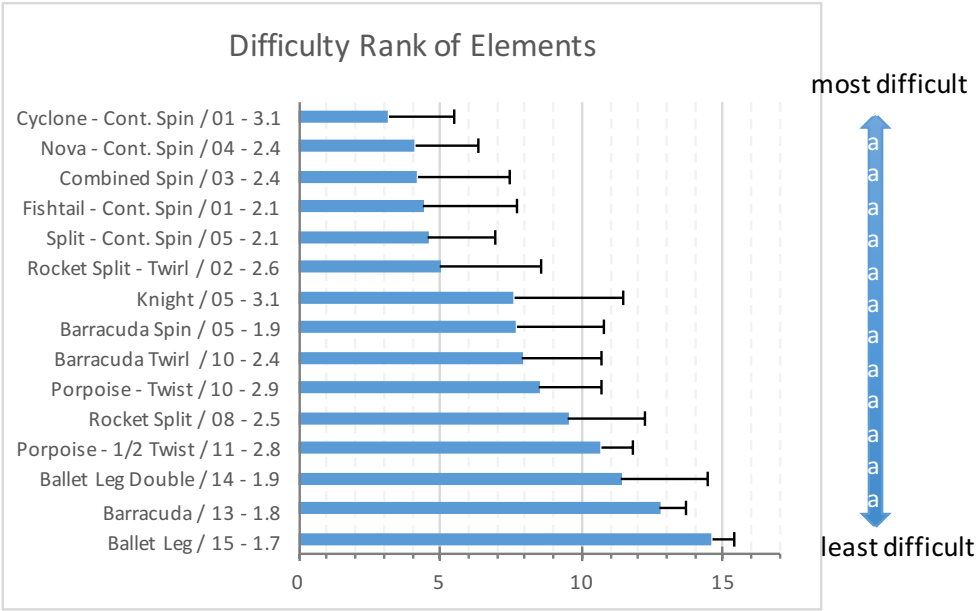
The impact of these modifications and changes become visible when reviewing the *Comparison of the Degrees of Difficulty of the Current FINA Figure Groups and Routine Elements*.

Of the 24 list figures, 14 (58.33%) degrees of difficulty changed. Ten figures (42%) remained the same. Twelve figures (86%) had a reduction in difficulty with the range being –0.1 to -0.4, with 2 (14%) increasing in value.

The impact on the elements was greater with 9 of 15 (60%) elements DD changing. Six of the 15 (40%) had DD that remained the same. Of the 9 changes, 2 (22.22%) had reductions, with a range of -0.1 to – 0.5. Seven (77.78%) had increases. The majority of those increasing in difficulty were spinning elements. This maybe the result of the fact that spins and twists are no longer treated as add-ons.

1.5 Group Work

After working on the transitions, two work groups were established. One continued to work on the transitions and completing the DD on some figures. The use of technology made this process much easier. The second group worked on deductions for figures.



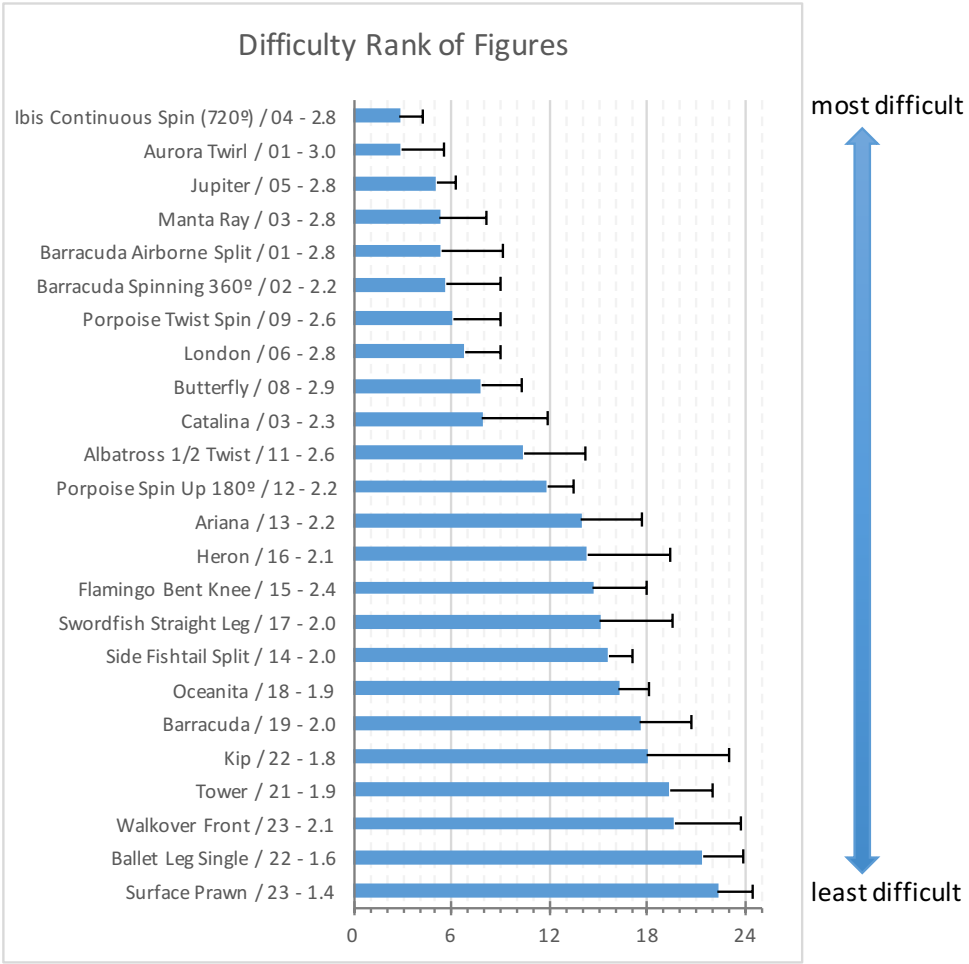


Fig.1 Results of survey on subjective difficulty rank in figures and elements to International coaches and judges (n=13)

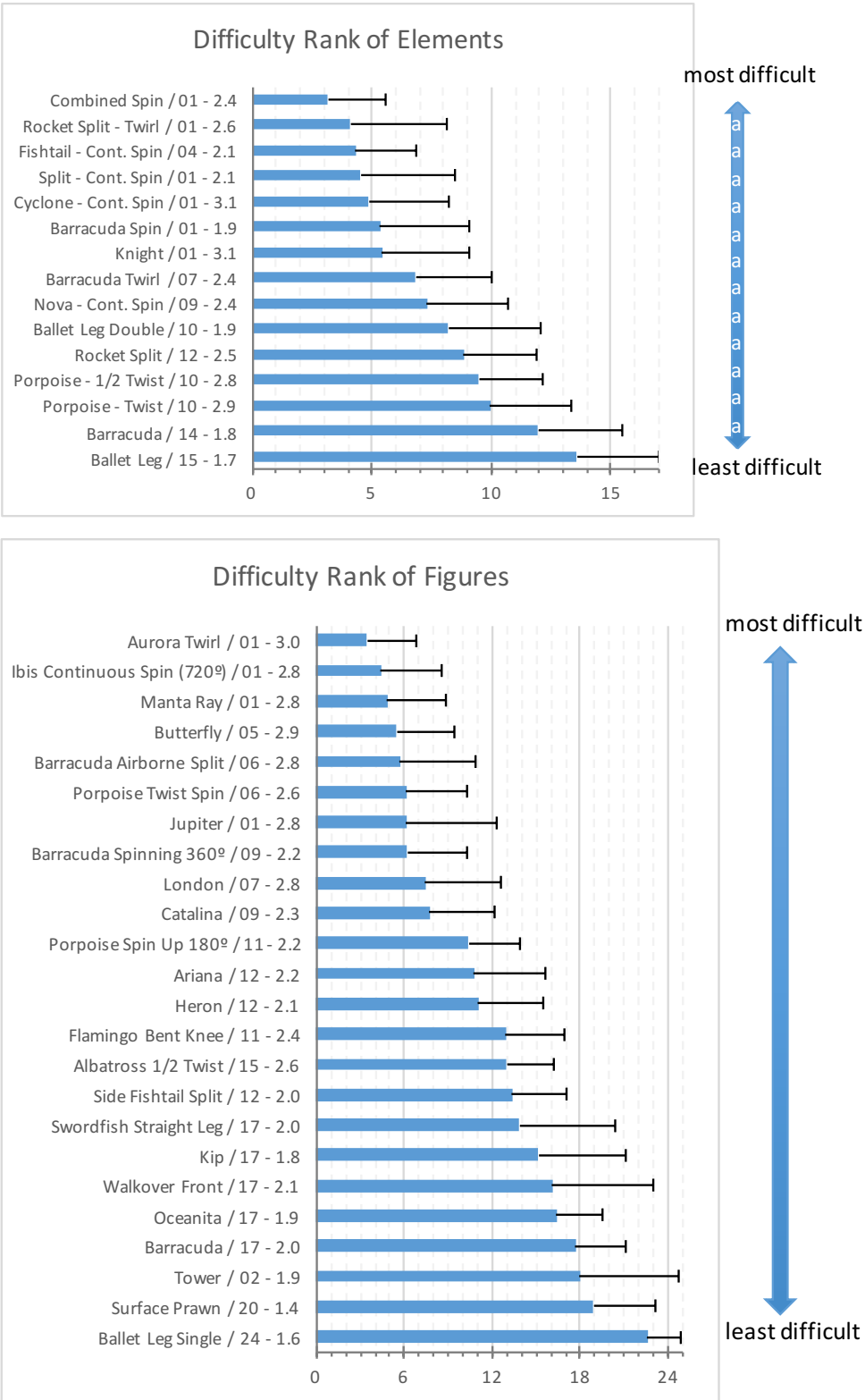
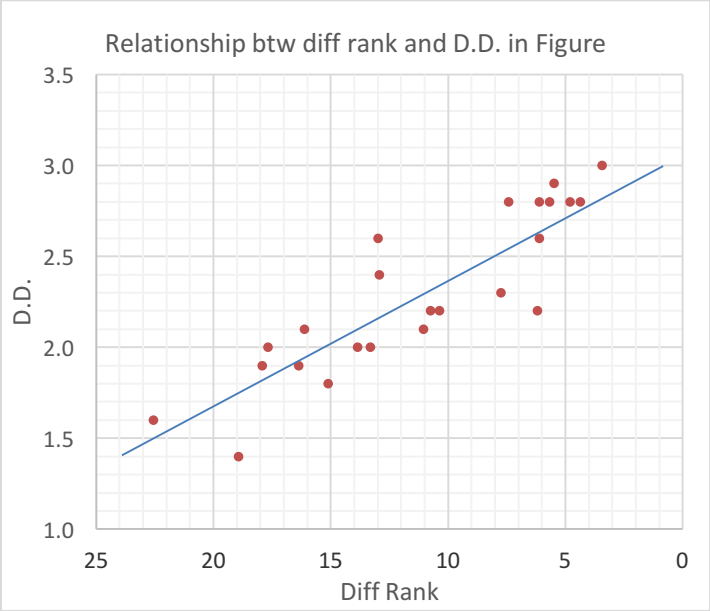


Fig.2 Results of survey on subjective difficulty rank in figures and elements to Japanese coaches and judges (n=16 for fig, n=17 for elem)



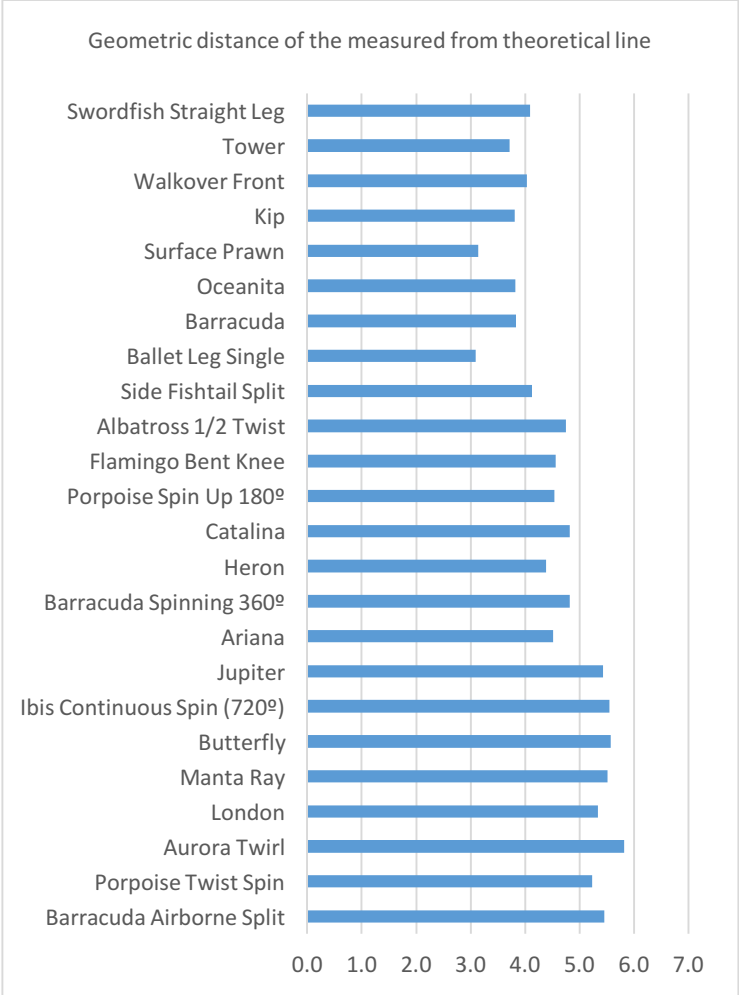


Fig.3 Relationship between subjective difficulty rank and DD in figures.

2. Procedures for Determining Degrees of Difficulty

(based on 1997 original DD Report)

Essential Synchro Specific Elements (ESSE) were assigned values. The assessed values are based upon the relative difficulty of each component within a given transition.

2.1 Essential Synchro Specific Elements

① Sculling Proficiency

② Center of Gravity and Buoyancy
- Relationship between Center of Gravity and Buoyancy as it affects stability
- How the change in the relationship between the center of gravity and buoyancy affects stability

③ Kinesthetic and Spatial Perception
- Kinesthetic awareness – the ability to know the spatial relationships of the body parts

④ Airborne Weight

⑤ Water Resistance
- Resistance as created by buoyancy and/or drag
- Formula: Drag = 1/2 x [water density] x [drag coefficient] x [cross sectional area (CSA)] x [speed of the object]^2

⑥ Joint Flexibility
- Awarded when required action (not initial position) is beyond normal Range of Movement

2.2 Procedure

2.2.1 Determine the numerical value of each transition within a figure or an element

NVT = Numerical Value of a Transition
VSP = Sculling Proficiency Values (Table 1)
VGB = Center of Gravity and Buoyancy Values (Table 2)
VKS = Kinesthetic and Spatial Perception Values (Table 3)
VAW = Airborne Weight Values (Table 4)
VWR = Water Resistance Values (Table 4)
VJF = Joint Flexibility Values (Table 6)

2.2.2 Add the NVT of all transitions:

NV = **ΣNVT**
NV = numerical value of the summation of difficulties of all transitions within the figure or element

2.2.3 Formula:

DD = NV/K + C

K & C: constants selected to allow conversion of all NVs to DDs within a selected DD range. For the existing range of NVs (11--158), with a designated DD range from 1.1 to 3.8

K = 54.3
C = 0.85
DD = degree of difficulty of a figure or an element

3. Values of Essential Synchro Specific Elements (ESSE)

Essential Synchro Specific Elements (ESSE) which are used to calculate the degree of difficulty of any given transition.

ESSE contains six components:

1. Sculling Proficiency Values (VSP)
2. Center of Gravity and Buoyancy Values (VGB)
3. Kinesthetic and Spatial Perception Values (VKS)
4. Airborne Weight Values (VAW)
5. Water Resistance Values (VWR)
6. Joint Flexibility Values (VJF)

Table #1 Sculling Proficiency Values (VSP)

Sculling to:	Value
Maintain	1
Propel	3
Sustain	5
Descending and ascending spins	7
Achieve speed and/or acceleration	9
Sustain dynamic height	10

Table #2 Center of Gravity and Buoyancy Values (VGB)
How the change in the relationship between the center of gravity and buoyancy affects stability

Effect:	Value
Minimal	1
Moderate	3
Maximum	5

Table #3 Kinesthetic and Spatial Perception Values (VKS)

Movements with:	Value
Minimal	1
Moderate	3
Maximum	7

Table #4 Airborne Weight Value (VAW)

	Base Value	Lifting or Lowering	Holding Leg(S)	Submerging Rising
		3.0	2.0	0.0
Stable Height	To/From Bent Knee	0.5	0.5	0.5
	Bent Knee to/From Ballet Leg	1.0		
	1 Leg Extended	2.5	4.0	2.5
	1 Leg Extended & 1 Leg Bent	3.0	4.0	3.0
	2 Legs Opening or Closing	5.0	5.0	
	2 Legs Extending or Bending	7.0		7.0
	2 Legs Extended Together	17.0	10.0	7.0
Dynamic Height	2 Legs & Torso Extended	15.0	15.0	10.0
	1 Leg & Torso Extended			7.0

Table #5 Values of Water Resistance (VWR)
Formula: Drag = 1/2 x [water density] x [drag coefficient] x [cross sectional area (CSA)] x [speed of the object]^2

CSA & Speed:	Value
Small – Moderate	1
Medium – Moderate	3
Large – Moderate	5
Small – Rapid	2
Medium – Rapid	6
Large - Rapid	15

Table #6 Joint Flexibility Values (VJF)
Awarded when required action (not initial position) is beyond normal Range of Movement

Joint:	Value
Shoulder (s)	1
Hips Flexion	2
Spine, Hips Extension	3

4. Numerical Value of Transitions (NVT)

The ESSE values in Tables 1-6 were applied all transitions.

Category 1: Airborne - Horizontal Base

Code	Transition	1. VSP	2. VGB	3. VSK	4. VAW	5. VWR	6. VJF	Total NVT
1-01	Back Layout to Ballet Leg (straight)	5	5	3	3.0 + 2.5		0	**18.5**
1-02	Back Layout to Bent Knee Back Layout	5	1	1	3.0 + 0.5		0	**10.5**
1-03	Back Layout to Tub	1	1	1			0	**3.0**
1-04	Ballet Leg Double 360° Surface Rotation	5	1	1	2.0 + 10.0	5	0	**24.0**
1-05	Ballet Leg Double to Ballet Leg (straight)	5	5	3	3.0 + 2.5 2.0 + 4.0		0	**24.5**
1-06	Ballet Leg Double to Tub	5	3	1	3.0 + 7.0		0	**19.0**
1-07	Ballet Leg to Back Layout (straight)	5	5	3	3.0 + 2.5		0	**18.5**
1-08	Ballet Leg to Ballet Leg Double (straight)	5	5	3	3.0 + 2.5 2.0 + 4.0		0	**24.5**
1-09	Ballet Leg to Bent Knee Back Layout	5	1	1	3.0 + 1.0		0	**11.0**
1-10	Ballet Leg to Flamingo	5	1	1	2.0 + 4.0		0	**13.0**
1-11	Bent Knee Back Layout to Back Layout	5	1	1	3.0 + 0.5		0	**10.5**
1-12	Bent Knee Back Layout to Ballet Leg	5	1	1	3.0 + 1.0		0	**11.0**
1-13	Flamingo to Back Layout	5	3	1	3.0 + 3.0		0	**15.0**
1-14	Flamingo to Ballet Leg Double	5	1	1	3.0 + 3.0		0	**13.0**
1-15	Flamingo to Bent Knee Back Layout	5	3	1	3.0 + 0.5 + 2.5		0	**15.0**
1-16	Front Layout to Bent Knee Front Layout	1	1	1		1	0	**4.0**
1-17	Tub to Back Layout	1	1	1			0	**3.0**
1-18	Tub to Ballet Leg Double	5	3	1	3.0 + 7.0		0	**19.0**
1-19	Exchange BL	5	1	1	3.0 + 0.5 + 1.0		0	**17.0**
1-20	Flamingo to Ballet Leg	5	1	1	2.0 + 4.0		0	**13.0**

Category 2: Airborne - Vertical Base

Code	Transition	1. VSP	2. VGB	3. VSK	4. VAW	5. VWR	6. VJF	Total NVT
2-01	Bent Knee Vertical (Unstable base) to Submerged Bent Knee Vertical	3	0	3	0.0 + 3.0	2	0	**11.0**
2-02	Bent Knee Vertical (Unstable base) to Submerged Vertical	3	1	3	0.0 + 3.0	2	0	**12.0**
2-03	Bent Knee Vertical to Vertical	5	1	1	3.0 + 0.5 2.0 + 4.0		0	**16.5**
2-04	Fishtail to Bent Knee Vertical	5	1	1	2.0 + 4.0 + 0.5		0	**13.5**
2-05	Fishtail to Front Pike	5	3	1	3.0 + 2.5		0	**14.5**
2-06	Fishtail to Knight	5	5	7	3.0 + 2.5		3	**31.0**
2-07	Fishtail to Knight at the surface	5	3	1	2.0 + 4.0	3	3	**21.0**
2-08	Fishtail to Split	5	1	1	3.0 + 2.5		3	**15.5**
2-09	Fishtail to Split (Rapid)	5	1	3	3.0 + 5.0		3	**20.0**
2-10	Fishtail to Vertical	5	3	1	3.0 + 2.5 2.0 + 4.0		0	**20.5**
2-11	Front Pike to Bent Knee Vertical	5	3	1	3.0 + 3.0		0	**15.0**
2-12	Front Pike to Fishtail	5	3	1	3.0 + 2.5		0	**14.5**
2-13	Front Pike to Split	5	3	1	3.0 + 5.0		3	**20.0**
2-14	Front Pike to Vertical	5	5	3	3.0 + 17.0		0	**33.0**
2-15	Vertical to Airborne Split (Unstable base)	10	0	3	3.0 + 15.0		3	**34.0**
2-16	Vertical to Airborne Split to Vertical (All bases unstable)	10	0	7	3.0 + 15.0 + 5.0		3	**43.0**
2-17	Vertical to Fishtail	5	3	1	3.0 + 2.5 2.0 + 4.0		0	**20.5**
2-18	Vertical to Fishtail to Vertical (Unstable base)	10	3	7	3.0 + 15.0 2.0 + 4.0		0	**44.0**
2-19	Vertical to Knight	5	3	1	3.0 + 2.5 2.0 + 4.0		3	**23.5**
2-20	Vertical to Split	5	0	1	3.0 + 5.0		3	**17.0**
2-21	Vertical to Split (Rapid)	5	0	1	3.0 + 5.0		3	**17.0**
2-22	Vertical to Front Pike	5	5	3	3.0 + 17.0		0	**33.0**
2-23	Vertical to Bent Knee Vertical	5	1	1	3.0 + 0.5 2.0 + 4.0		0	**16.5**
2-24	Vertical to Bent Knee Vertical (all Unstable base)	10	1	3	3.0 + 15.0		0	**32.0**
2-25	Bent Knee Vertical to Airborne Split (all Unstable base)	10	0	3	3.0 + 15.0		3	**34.0**
2-26	Vertical to Bent Knee to Airborne Split to Vertical (All bases unstable)	10	3	7	3.0 + 15.0 + 5.0 2.0 + 4.0		3	**52.0**
2-27	Vertical to Fishtail (all Unstable base)	10	3	3	3.0 + 15.0		0	**34.0**

Category 3: Arched Base or Movement

Code	Transition	1. VSP	2. VGB	3. VSK	4. VAW	5. VWR	6. VJF	Total NVT
3-01	Airborne Split to Airborne Split (crossing)	10	0	7	2.0 + 30.0		3	**52.0**
3-02	Airborne Split to Vertical (Unstable base)	10	0	3	2.0 + 15.0		0	**30.0**
3-03	Airborne Split to Vertical Bent Knee (Unstable base)	10	1	3	2.0 + 15.0		0	**31.0**
3-04	Arched Bent Knee Vertical to Ballet Leg	5	5	3	3.0 + 1.0 + 2.5	5	0	**24.5**
3-05	Arched Bent Knee Vertical to Knight	5	3	3	3.0 + 2.5 + 0.5		3	**20.0**
3-06	Arched Fishtail to Fishtail	5	1	1	2.0 + 4.0	1	0	**14.0**
3-07	Back Layout to Bent Knee Surface Arch	5	1	3	3.0 + 0.5	1	1 + 3	**17.5**
3-08	Back Layout to Surface Arch	3	1	3		1	1 + 3	**12.0**
3-09	Ballet Leg to Knight	5	3	3	2.0 + 4.0	5	3	**25.0**
3-10	Bent Knee Front Layout to Arched Bent Knee Vertical	5	3	7	3.0 + 3.0	5	3	**29.0**
3-11	Bent Knee Front Layout to Bent knee Surface Arch	5	5	7	3.0 + 6.0	5	3 + 1	**35.0**
3-12	Bent Knee Surface Arch to Bent Knee Vertical	5	3	7	3.0 + 3.0		0	**21.0**
3-13	Bent Knee Surface Arch to Surface Arch	5	1	1	3.0 + 0.5		3 + 1	**14.5**
3-14	Bent Knee Surface Arch to Vertical as Twirl is executed	9	5	7	3.0 + 2.5 + 0.5	2	0	**29.0**
3-15	Bent Knee Surface Arch to Vertical	5	3	7	3.0 + 2.5 + 0.5		0	**21.0**
3-16	Bent Knee Vertical to Bent Knee Surface Arch	5	3	1	3.0 + 3.0		3 + 1	**19.0**
3-17	Fishtail to Bent Knee Surface Arch (Rapid)	5	3	7	3.0 + 5.0 + 3.0 2.0 + 4.0		3 + 1	**36.0**
3-18	Front Layout to Arched Fishtail	5	5	7	3.0 + 2.5	5	3	**30.5**
3-19	Front Layout to Split	5	5	7	3.0 + 5.0	5	3	**33.0**
3-20	Front Pike to Split on surface	1	1	1		3	3	**9.0**
3-21	Knight to Ballet Leg	5	3	3	2.0 + 4.0	5	0	**22.0**
3-22	Knight to Bent Knee Surface Arch	5	1	1	3.0 + 1.0		3 + 1	**15.0**
3-23	Knight to Bent Knee Vertical	5	3	7	3.0 + 3.0		0	**21.0**
3-24	Knight to Fishtail (body 180° rotation)	5	1	1	2.0 + 4.0	1	0	**14.0**
3-25	Knight to Fishtail at surface	5	3	1	2.0 + 4.0	3	0	**18.0**

3-26	Knight to Split	5	1	1	3.0 + 2.5		3	**15.5**
3-27	Knight to Surface Arch	5	3	1	3.0 + 2.5		3 + 1	**18.5**
3-28	Knight to Vertical	5	3	7	3.0 + 2.5 2.0 + 4.0		0	**26.5**
3-29	Split to Fishtail	5	1	3	3.0 + 2.5		0	**14.5**
3-30	Split to Front Pike	5	3	3	3.0 + 5.0		0	**19.0**
3-31	Split to Knight	5	1	3	3.0 + 2.5		3	**17.5**
3-32	Split to Surface Arch	5	3	3	3.0 + 5.0		3 + 1	**23.0**
3-33	Split to Vertical	5	0	7	3.0 + 5.0		0	**20.0**
3-34	Split to Vertical at Ankle Level	1	0	3		1	0	**5.0**
3-35	Surface Arch to Back Layout	3	1	3		1	0	**8.0**
3-36	Surface Arch to Knight	5	3	3	3.0 + 2.5		3	**19.5**
3-37	Surface Arch to Split	5	3	3	3.0 + 5.0		3	**22.0**
3-38	Surface Arch to Vertical	5	5	7	3.0 + 17.0		0	**37.0**
3-39	Bent Knee Surface Arch to Knight	5	1	1	3.0 + 1.0		3	**14.0**
3-40	Vertical to Surface Arch	5	5	3	3.0 + 17.0		3 + 1	**37.0**
3-41	Split to Vertical (Rapid)	5	0	3	3.0 + 5.0		0	**16.0**
3-42	Vertical to Surface Arch Bent Knee	5	3	3	3.0 + 2.5 + 0.5		3 + 1	**21.0**

Category 4: Circular Patterns

Code	Transition	1. VSP	2. VGB	3. VSK	4. VAW	5. VWR	6. VJF	Total NVT
4-01	Back Layout to Dolphin First Quarter (head first)	3	1	3		1	0	**8.0**

Category 5: Descending

Code	Transition	1. VSP	2. VGB	3. VSK	4. VAW	5. VWR	6. VJF	Total NVT
5-01	Back Layout to Submerged Back Pike	3	1	3		1	2	**10.0**
5-02	Back Layout to Submerged Ballet Leg Double	3	1	3		3	0	**10.0**
5-03	Ballet Leg Double to Submerged Ballet Leg Double	3	0	3	0.0 + 7.0	3	0	**16.0**
5-04	Ballet Leg to Submerged Ballet Leg	3	0	3	0.0 + 2.5	5	0	**13.5**
5-05	Bent Knee Vertical to Submerged Bent Knee Vertical	3	0	3	0.0 + 3.0	1	0	**10.0**
5-06	Bent Knee Vertical to Submerged Vertical	3	1	3	0.0 + 3.0	1	0	**11.0**
5-07	Bent Knee Vertical Unstable Base to Submerged Bent Knee Vertical	3	0	3	0.0 + 3.0	2	0	**11.0**
5-08	Vertical at Ankle Level to Submerged Vertical	3	0	1		1	0	**5.0**
5-09	Vertical to Ankle Level Vertical	3	0	3	0.0 + 7.0	1	0	**14.0**
5-10	Vertical to Submerged Vertical	3	0	3	0.0 + 7.0	1	0	**14.0**
5-11	Vertical Unstable Base to Submerged Vertical	3	0	3	0.0 + 7.0	2	0	**15.0**
5-12	Ballet Leg Double to Submerged Back Pike	3	1	3	0.0 + 7.0	1	0	**15.0**
5-13	Bent Knee Vertical Unstable Base to Submerged Vertical	3	0	3	0.0 + 3.0	2	0	**11.0**
5-14	Vertical to Submerged Vertical (rapid)	3	0	1	0.0 + 7.0	2	0	**13.0**
5-15	Vertical Unstable Base to ankle level Vertical	3	0	3	0.0 + 7.0	2	0	**15.0**
5-16	Bent Knee Vertical to Submerged Bent Knee Vertical ankle level (rapid)	3	0	3	0.0 + 3.0	2	0	**11.0**
5-17	Bent Knee Vertical to Submerged Bent Knee Vertical (rapid)	3	0	3	0.0 + 3.0	2	0	**11.0**
5-18	Bent Knee Vertical to Bent Knee Vertical ankle level	3	0	3	0.0 + 3.0	1	0	**10.0**

Category 6: Multi-dimensional

Code	Name	1. VSP	2. VGB	3. VSK	4. VAW	5. VWR	6. VJF	Total NVT
6-01	Arched Bent Knee Vertical to Submerged Flamingo	5	3	7	0.0 + 3.0	3	0	**21.0**
6-02	Back Layout to Front Pike (Albatross turn)	3	1	3		3	1	**11.0**
6-03	Ballet Leg to Fishtail (Catalina Rotation)	5	3	7	2.0 + 4.0	3	0	**24.0**
6-04	Bent Knee Surface Arch to Vertical with 360° rotation	5	5	7	3.0 + 3.0 + 0.5	3 x 2	0	**29.5**
6-05	Fishtail to Ballet Leg (Catalina Reverse Rotation)	5	3	7	2.0 + 4.0	3	0	**24.0**
6-06	Fishtail to Ballet Leg Double with Reserse Catalina Rotation	5	5	7	3.0 + 2.5 2.0 + 4.0	3	0	**31.5**
6-07	Front Pike to Split through Side Fishtail	5	3	3	3.0 + 5.0	1	3	**23.0**
6-08	Front Pike to Vertical with a Full Twist	5	5	3	3.0 + 17.0	1 x 2	0	**35.0**
6-09	Side Ballet Leg to Front Pike	3	1	3		1	0	**8.0**
6-10	Split through Knight variant to Bent Knee Vertical with 1/2 Twist	5	3	7	3.0 + 3.0	1	0	**22.0**
6-11	Split to Fishtail with rapid 180° rotation	5	1	3	3.0 + 2.5	2	0	**16.5**
6-12	Submerged Ballet Leg Double to Vertical with 180° rotation	3	1	7	0.0 + 7.0	1	0	**19.0**
6-13	Submerged Ballet Leg to Fishtail (Catalina Rotation)	3	1	7	0.0 + 2.5	1	0	**14.5**
6-14	Front Pike to Vertical with half twist (180° rotation - Rapid)	5	3	3	3.0 + 17.0	2	0	**33.0**
6-15	45° off angle Vertical to Surface Arch with 90° rotation	5	5	3	3.0 + 17.0	1	3 + 1	**38.0**

Category 7: Submerged

Code	Transition	1. VSP	2. VGB	3. VSK	4. VAW	5. VWR	6. VJF	Total NVT
7-01	Submerged Ballet Leg Double to Ballet Leg Double	3	0	3	0.0 + 7.0	3	0	**16.0**
7-02	Submerged Ballet Leg Double to Split	3	1	3		1	3	**11.0**
7-03	Submerged Ballet Leg Double to Submerged Ballet Leg	1	1	3		3	0	**8.0**
7-04	Submerged Ballet Leg Double to Submerged Flamingo	1	1	1			0	**3.0**
7-05	Submerged Ballet Leg Double to Submerged Heron Pike	1	1	1			2	**5.0**
7-06	Submerged Ballet Leg to Ballet Leg	3	0	3	0.0 + 2.5	5	0	**13.5**
7-07	Submerged Bent Knee Vertical to Bent Knee Vertical	3	0	3	0.0 + 3.0		0	**9.0**
7-08	Submerged Flamingo to Ballet Leg	3	1	1	0.0 + 2.5	3	0	**10.5**
7-09	Submerged Flamingo to Flamingo	3	0	1	0.0 + 3.0	3	0	**10.0**
7-10	Submerged Vertical to Fishtail	3	1	1	0.0 + 2.5		0	**7.5**
7-11	Submerged Vertical to Submerged Back Pike	1	3	3		3	2	**12.0**
7-12	Submerged Vertical to Submerged Ballt Leg Double	1	3	3		3	0	**10.0**
7-13	Submerged Vertical to Vertical	3	0	3	0.0 + 7.0		0	**13.0**
7-14	Submerged Ballet Leg Double to Submerged Back Pike	1	1	1			2	**5.0**
7-15	Submerged Ballet Leg Double to Flamingo with 180 rotation	3	1	3	3.0 + 2.5	3	0	**15.5**
7-16	Submerged Ballet Leg Double to Flamingo with 360 rotation	3	1	3	3.0 + 2.5	3 x 2	0	**18.5**

Category 8: Rotation Lateral Axis

Code	Transition	1. VSP	2. VGB	3. VSK	4. VAW	5. VWR	6. VJF	Total NVT
8-01	Back Layout to Back Pike	3	1	1	0.0 + 7.0		2	**14.0**
8-02	Back Layout to Inverted Tuck through Ballet Leg (Rapid)	5	1	3	3.0 + 0.5 + 1.0 + 3.0		0	**16.5**
8-03	Back Layout to Tuck	1	1	1			0	**3.0**
8-04	Back Pike "V" to Back Layout	3	1	1	0.0	1	0	**6.0**
8-05	Back Pike to "V"	3	0	3		5	2	**13.0**
8-06	Ballet Leg to Fishtail (tip)	5	5	7	3.0 + 2.5	5	0	**33.0**
8-07	Fishtail to Ballet Leg (tip)	5	5	7	3.0 + 2.5	5	0	**33.0**
8-08	Front Layout to Front Pike	3	1	1		1	0	**6.0**
8-09	Front Pike (head down) to Front Layout	3	1	1		1	0	**6.0**
8-10	Front Pike (legs down) to Front Layout	3	1	1		1	0	**6.0**
8-11	Front Pike to Submerged Ballet Leg Double	3	1	3		1	0	**8.0**
8-12	Submerged Ballet Let Double to Front Pike (legs down)	3	1	3		1	0	**8.0**
8-13	Tuck to Back Layout	1	1	1			0	**3.0**
8-14	Tuck to Inverted Tuck	1	0	1			0	**2.0**
8-15	Tuck to Tuck	3	0	1		1	0	**5.0**
8-16	Ballet Leg to Inverted Tuck	1	1	1	3.0 + 1.0		0	**7.0**

Category 9

Category 9.1: Rotation Longitudinal Axis - Twists

Code	Transition	1. VSP	2. VGB	3. VSK	4. VAW	5. VWR	6. VJF	Total NVT
9.1-01	Ballet Leg to Side Ballet Leg	5	5	3	3.0 + 2.5		0	**18.5**
9.1-02	Bent Knee Vertical Full Twist	5	0	3	2.0 + 8.0	1 x 2	0	**20.0**
9.1-03	Bent Knee Vertical Half Twist	5	0	3	2.0 + 4.0	1	0	**15.0**
9.1-04	Bent Knee Vertical to Vertical with Full Twist (extending & joining)	5	1	3	2.0 + 8.0 + 1.0	1 x 2	0	**22.0**
9.1-05	Bent Knee Vertical to Vertical with Half Twist (extending & joining)	5	1	3	2.0 + 4.0 + 0.5	1	0	**16.5**
9.1-06	Fishtail 2 Full Twists (720° rotations - Rapid)	9	0	7	2.0 + 8.0	6 x 4	0	**50.0**
9.1-07	Fishtail Half Twist	5	0	3	2.0 + 4.0	3	0	**17.0**
9.1-08	Knight Full Twist	9	0	3	2.0 + 8.0	6 x 2	0	**34.0**
9.1-09	Knight Half Twist	9	0	3	2.0 + 4.0	6	0	**24.0**
9.1-10	Split Half Twist	5	0	3		3	0	**11.0**
9.1-11	Split to Split (Ariana turn)	5	0	1		1	3	**10.0**
9.1-12	Split to Vertical with Full Twist (closing 360°)	5	0	7	3.0 + 10.0	1 x 2	0	**27.0**
9.1-13	Split to Vertical with Half Twist (closing 180°)	5	0	7	3.0 + 5.0	1	0	**21.0**
9.1-14	Vertical Full Twist	5	0	3	2.0 + 20.0	1 x 2	0	**32.0**
9.1-15	Vertical Half Twist	5	0	3	2.0 + 10.0	1	0	**21.0**
9.1-16	Vertical to Bent Knee Vertical with Full Twist	5	1	3	3.0 + 0.5 2.0 + 4.0	1 x 2	0	**20.5**
9.1-17	Vertical to Split with Full Twist (opening 360°)	5	0	3	3.0 + 10.0	1 x 2	3	**26.0**
9.1-18	Vertical to Split with Half Twist (opening 180°)	5	0	3	3.0 + 5.0	1	3	**20.0**
9.1-19	Fishtail to Vertical with 720° rotations - Rapid	5	3	3	3.0 + 5.0 2.0 + 8.0	2 x 4	0	**37.0**
9.1-20	Fishtail to Vertical with 360° rotations - Rapid	5	3	3	3.0 + 2.5 2.0 + 4.0	2 x 2	0	**26.5**
9.1-21	Split to Vertical with Full Twist (closing 360°) - Rapid	5	0	7	3.0 + 10.0	2 x 2	0	**29.0**
9.1-22	Split to Vertical with Half Twist (closing 180°) - Rapid	5	0	3	3.0 + 5.0	2	0	**18.0**
9.1-23	Side Fishtail to 45 off angle Vertical with 180° rotations	5	3	3	3.0 + 2.5 2.0 + 4.0	1	0	**23.5**
9.1-24	45° off angle Vertical Half Twist	5	3	3	2.0 + 10.0	1	0	**24.0**
9.1-25	Fishtail to Vertical with 180° rotations	5	3	1	3.0 + 2.5 2.0 + 4.0	1	0	**21.5**
9.1-26	Vertical 2 Full Twist (720°)	5	0	3	2.0 + 40.0	1 x 4	0	**54.0**

Category 9.2: Rotation Longitudinal Axis - Twirls

Code	Transition	1. VSP	2. VGB	3. VSK	4. VAW	5. VWR	6. VJF	Total NVT
9.2-01	Airborne Split to Vertical with Twirl (All Bases Unstable)	10	0	7	3.0 + 5.0	2	0	**27.0**
9.2-02	Bent Knee Vertical to Vertical with Twirl	9	1	3	2.0 + 4.0 + 0.5	2	0	**21.5**
9.2-03	Bent Knee Vertical Twirl	9	0	3	2.0 + 4.0	2	0	**20.0**
9.2-04	Split to Vertical with Twirl	9	0	3	3.0 + 5.0	2	0	**22.0**
9.2-05	Vertical to Bent Knee Vertical with Twirl	9	1	3	2.0 + 4.0	2	0	**21.0**
9.2-06	Vertical Twirl	9	0	3	2.0 + 10.0	2	0	**26.0**
9.2-07	Vertical Twirl - Unstable Base	10	0	7	2.0 + 15.0	2	0	**36.0**
9.2-08	Vertical Twirl at Ankle	9	0	0		2	0	**11.0**
9.2-09	Bent Knee Vertical Twirl (Unstable)	10	0	3	2.0 + 4.0	2	0	**21.0**

Category 9.3: Rotation Longitudinal Axis - Descending Spins

Code	Transition	1. VSP	2. VGB	3. VSK	4. VAW	5. VWR	6. VJF	Total NVT
9.3-01	Bent Knee Vertical 180° (Descending)	7	0	3	0.0 + 3.0	3	0	**16.0**
9.3-02	Bent Knee Vertical 360° (Descending)	7	0	3	0.0 + 3.0	3 x 2	0	**19.0**
9.3-03	Bent Knee Vertical Continuous Spin 720° (Rapid)	9	0	7	0.0 + 3.0	2 x 4	0	**27.0**
9.3-04	Bent Knee Vertical Join Continuous Spin 1080° (Rapid)	9	1	3	0.0 + 3.0	2 x 6	0	**28.0**
9.3-05	Bent Knee Vertical Join Spin 180° (Descending)	7	1	3	0.0 + 3.0	1	0	**15.0**
9.3-06	Bent Knee Vertical Join Spin 180° (Unstable Base - Rapid)	9	1	3	0.0 + 3.0	2	0	**18.0**
9.3-07	Bent Knee Vertical Join Spin 360° (Descending)	7	1	3	0.0 + 3.0	1 x 2	0	**16.0**
9.3-08	Fishtail to Vertical Continuous Spins 720° (Helicopter spin - Rapid)	9	3	7	0.0 + 2.5	2 x 4	0	**29.5**
9.3-09	Fishtail to Vertical Spin 360° (Helicopter spin)	7	3	3	0.0 + 2.5	1 x 2	0	**17.5**
9.3-10	Vertical 180° (Descending)	7	0	3	0.0 + 7.0	1	0	**18.0**
9.3-11	Vertical 180° (Unstable Base - Rapid)	9	0	7	0.0 + 10.0	2	0	**28.0**
9.3-12	Vertical 360° (Descending)	7	0	3	0.0 + 7.0	1 x 2	0	**19.0**
9.3-13	Vertical 360° (Unstable Base - Rapid)	9	0	7	0.0 + 10.0	2 x 2	0	**30.0**
9.3-14	Vertical Continuous Spin 1080° (Rapid)	9	0	7	0.0 + 7.0	2 x 6	0	**35.0**
9.3-15	Vertical Continuous Spin 1440° (Rapid)	9	0	7	0.0 + 7.0	2 x 8	0	**39.0**
9.3-16	Vertical Continuous Spin 720° (Rapid)	9	0	7	0.0 + 7.0	2 x 4	0	**31.0**
9.3-17	Vertical Continuous Spin 720°(Unstable Base - Rapid)	9 + 9	0	7 + 7	0.0 + 10.0	2 x 4	0	**50.0**
9.3-18	Bent Knee Vertical Join Continuous Spin 720° (Rapid)	9	1	3	0.0 + 3.0	2 x 4	0	**24.0**
9.3-19	Bent Knee Vertical 180° (Descending, Unstable Base - Rapid)	7	0	7	0.0 + 3.0	6	0	**23.0**
9.3-20	Bent Knee Vertical 360° (Descending, Unstable Base - Rapid)	7	0	7	0.0 + 3.0	6 x 2	0	**29.0**
9.3-21	Bent Knee Vertical Continuous Spin 720° (Unstable Base - Rapid)	9 + 9	0	7	0.0 + 3.0	6 x 4	0	**52.0**
9.3-22	Bent Knee Vertical Join Spin 360° (Unstable Base - Rapid)	9	1	7	0.0 + 3.0	2 x 2	0	**24.0**
9.3-23	Fishtail - Bent Knee - Vertical join Spin 360° (Unstable Base - Rapid)	9	3	7	0.0 + 3.0	2 x 2	0	**26.0**
9.3-24	Fishtail to Vertical Spin 360° (Unstable Base, rapid Helicopter spin)	9	3	7	0.0 + 2.5	2 x 2	0	**25.5**

Category 9.4: Rotation Longitudinal Axis - Ascending Spins

Code	Transition	1. VSP	2. VGB	3. VSK	4. VAW	5. VWR	6. VJF	Total NVT
9.4-01	Bent Knee Vertical 180° (Ascending)	7	0	3	0.0 + 3.0	1	0	**14.0**
9.4-02	Bent Knee Vertical 360° (Ascending)	7	0	3	0.0 + 3.0	1 x 2	0	**15.0**
9.4-03	Bent Knee Vertical Join 180° (Ascending)	7	1	3	0.0 + 3.0 + 0.5	1	0	**15.5**
9.4-04	Bent Knee Vertical Join 360° (Ascending)	7	1	3	0.0 + 3.0 + 0.5	1 x 2	0	**16.5**
9.4-05	Vertical 180° (Ascending)	7	0	3	0.0 + 7.0	1	0	**18.0**
9.4-06	Vertical 360° (Ascending)	7	0	3	0.0 + 7.0	1 x 2	0	**19.0**

Category 9.5: Rotation Longitudinal Axis - Combined Actions

Code	Transition	1. VSP	2. VGB	3. VSK	4. VAW	5. VWR	6. VJF	Total NVT
9.5-01	Bent Knee Combined Spin (360° + 360°)	7 + 7	0	3 + 3	0.0 + 6.0	1 x 4	0	**30.0**
9.5-02	Bent Knee Combined Spin Joining and Bending (360° + 360°)	7 + 7	0	3 + 3	0.0 + 6.0	1 x 4	0	**30.0**
9.5-03	Combined Spin (1080°+ 1080°)	7 + 7	0	7 + 7	0.0 + 14.0	1 x 12	0	**54.0**
9.5-04	Combined Spin (360° + 360°)	7 + 7	0	3 + 3	0.0 + 14.0	1 x 4	0	**38.0**
9.5-05	Reverse Bent Knee Combined Spin (360° + 360°)	7 + 7	0	3 + 3	0.0 + 6.0	1 x 4	0	**30.0**
9.5-06	Reverse Combined Spin (360° + 360°)	7 + 7	0	3 + 3	0.0 + 14.0	1 x 4	0	**38.0**
9.5-07	Reverse Combined Spin (1080° + 1080°)	7 + 7	0	7 + 7	0.0 + 14.0	1 x 12	0	**54.0**
9.5-08	Twist Spin	5 + 9	0	3 + 3	2.0 + 10.0 0.0 + 7.0	1 + 2 x 4	0	**48.0**
9.5-09	Combined Spin (360° + 360°)(Rapid)	9 + 9	0	1 + 1	0.0 + 14.0	2 x 4	0	**42.0**
9.5-10	Combined Spin (720° + 720°)(Rapid)	9 + 9	0	1 + 1	0.0 + 14.0	2 x 8	0	**50.0**
9.5-11	Combined Spin (720° + 720°)	7 + 7	0	3 + 3	0.0 + 14.0	1 x 8	0	**42.0**
9.5-12	Combined Spin (1080°+ 1080°)(Rapid)	9 + 9	0	7 + 7	0.0 + 14.0	2 x 12	0	**70.0**

Category 10: Unrolls

Code	Transition	1. VSP	2. VGB	3. VSK	4. VAW	5. VWR	6. VJF	Total NVT
10-01	Ballet Leg Double to Vertical	5	3	3	2.0 + 10.0	5	0	**28.0**
10-02	Flamingo to Bent Knee Vertical	5	1	3	2.0 + 4.0	5	0	**20.0**
10-03	Flamingo to Fishtail	5	3	3	2.0 + 4.0 + 0.5	5	0	**22.5**
10-04	Inverted Tuck to Bent Knee Vertical	5	0	3	3.0 + 3.0	1	0	**15.0**
10-05	Inverted Tuck to Vertical	5	0	7	3.0 + 7.0	1	0	**23.0**
10-06	Inverted Tuck to Vertical with 360° roation	5	1	7	3.0 + 7.0	1 x 2	0	**25.0**
10-07	Submerged Back Pike to Bent Knee Vertical Unstable (Thrust)	9	3	7	0.0 + 7.0	2	0	**28.0**
10-08	Submerged Back Pike to Vertical Unstable (Thrust)	9	3	7	0.0 + 10.0	2	0	**31.0**
10-09	Submerged Ballet Leg Double to Knight (Aurora)	3	3	3	0.0 + 3.0	1	3	**16.0**
10-10	Submerged Ballet Leg Double to Vertical (moderate)	3	1	7	0.0 + 7.0	1	0	**19.0**
10-11	Submerged Heron Pike to Bent Knee Vertical Unstable (Thrust)	9	3	7	0.0 + 7.0	2	0	**28.0**
10-12	Inverted Tuck to Vertical (Rapid)	5	0	1	3.0 + 7.0	2	0	**18.0**

5. International Figures

5.1 International Figure Categories

CATEGORY I

101	Ballet Leg Single	1.6
102	Ballet Leg Alternate	2.4
103	Submarine Ballet Leg Single	2.1
106	Straight Ballet Leg	1.6
110	Ballet Leg Double	1.7
111	Submarine Ballet Leg Double	2.2
112	Ibis	2.5
112a	Ibis ½ Twist	2.9
112b	Ibis Full Twist	3.1
112c	Ibis Twirl	3.0
112d	Ibis Spinning 180°	2.6
112e	Ibis Spinning 360°	2.6
112f	Ibis Continuous Spin (720º)	2.8
112g	Ibis Twist Spin	3.1
112h	Ibis Spin Up 180°	3.1
112i	Ibis Spin Up 360°	3.1
112j	Ibis Combined Spin (360°+360°)	3.2
113	Crane	3.8
115	Catalina	2.3
115a	Catalina ½ Twist	2.7
115b	Catalina Full Twist	2.9
115c	Catalina Twirl	2.8
115d	Catalina Spinning 180°	2.4
115e	Catalina Spinning 360°	2.4
115f	Catalina Continuous Spin (720°)	2.6
115g	Catalina Twist Spin	2.9
115h	Catalina Spin Up 180°	2.9
115i	Catalina Spin Up 360°	2.9
115j	Catalina Combined Spin (360°+360°)	3.0
116	Catalarc	2.9
117	Catalarc Open 180°	3.0

118	Helicopter	2.1
125	Eiffel Tower	2.6
125a	Eiffel Tower ½ Twist	3.0
125b	Eiffel Tower Full Twist	3.2
125c	Eiffel Tower Twirl	3.1
125d	Eiffel Tower Spinning 180°	2.7
125e	Eiffel Tower Spinning 360°	2.7
125f	Eiffel Tower Continuous Spin (720°)	2.9
125g	Eiffel Tower Twist Spin	3.3
125h	Eiffel Tower Spin Up 180°	3.2
125i	Eiffel Tower Spin Up 360°	3.2
128	Eiffel Walk	2.7
130	Flamingo	2.5
130a	Flamingo ½ Twist	2.9
103b	Flamingo Full Twist	3.1
130c	Flamingo Twirl	3.0
130d	Flamingo Spinning 180°	2.6
130e	Flamingo Spinning 360°	2.6
130f	Flamingo Continuous Spin (720°)	2.8
130g	Flamingo Twist Spin	3.1
130h	Flamingo Spin Up 180°	3.1
130i	Flamingo Spin Up 360°	3.1
130j	Flamingo Combined Spin (360°+360°)	3.2
140	Flamingo Bent Knee	2.4
140a	Flamingo Bent Knee ½ Twist	2.8
140b	Flamingo Bent Knee Full Twist	3.0
140c	Flamingo Bent Knee Twirl	2.9
140d	Flamingo Bent Knee Spinning 180°	2.5
140e	Flamingo Bent Knee Spinning 360°	2.5
140f	Flamingo Bent Knee Continuous Spin (720°)	2.7
140g	Flamingo Bent Knee Twist Spin	3.0
140h	Flamingo Bent Knee Spin Up 180°	3.0
140i	Flamingo Bent Knee Spin Up 360°	3.0
140j	Flamingo Bent Knee Combined Spin (360°+360°)	3.1
141	Stingray	3.2
142	Manta Ray	3.0

143	Rio	3.1
150	Knight	3.1
154	London	1.9
154j-1	London Combined Spin 360° (360°+360°)	2.7
154j-2	London Combined Spin 720° (720°+720°)	2.9

CATEGORY II

226	Swan	2.1
240	Albatross	2.2
240a	Albatross ½ Twist	2.2
240b	Albatross Full Twist	2.3
240c	Albatross Twirl	2.3
240d	Albatross Spinning 180°	1.9
240e	Albatross Spinning 360°	1.9
240h	Albatross Spin Up 180°	2.3
240i	Albatross Spin Up 360°	2.4
240j	Albatross Combined Spin (360°+360°)	2.3
241	Goeland	1.9

CATEGORY III

301	Barracuda	1.9
301c	Barracuda Twirl	2.5
301d	Barracuda Spinning 180°	2.1
301e	Barracuda Spinning 360°	2.2
301f	Barracuda Continuous Spin (720°)	2.5
301h	Barracuda Spin Up 180°	2.5
301i	Barracuda Spin Up 360°	2.5
302	Blossom	1.4
303	Somersault Back Pike	1.5
306	Barracuda Bent Knee	1.8
306d	Barracuda Bent Knee Spinning 180°	1.9
306e	Barracuda Bent Knee Spinning 360°	2.0
307	Flying Fish	2.7
307d	Flying Fish Spinning 180°	2.9
307e	Flying Fish Spinning 360°	3.0

308	Barracuda Airborne Split	2.7
308i	Barracuda Airborne Split Spin Up 360°	3.3
310	Somersault Back Tuck	1.1
311	Kip	1.6
311a	Kip ½ Twist	2.0
311b	Kip Full Twist	2.2
311c	Kip Twirl	2.1
311d	Kip Spinning 180°	1.7
311e	Kip Spinning 360°	1.7
311f	Kip Continuous Spin (720°)	1.9
311g	Kip Twist Spin	2.2
311h	Kip Spin Up 180°	2.2
311i	Kip Spin Up 360°	2.2
311j	Kip Combined Spin (360°+360°)	2.3
312	Kip Split	2.3
313	Kip Split Closing 180°	2.3
314	Kip Split Open 360°	3.0
315	Seagull	2.1
316	Kipnus	1.4
317	Kipnus Variant	1.9
318	Kip Bent Knee	1.8
319	Kipswirl	1.7
319c	Kipswirl Twirl	2.1
319d	Kipswirl Spinning 180°	1.7
319e	Kipswirl Spinning 360°	1.8
319f	Kipswirl Continuous Spin (720°)	2.0
320	Kipswirl Split Closing 180°	2.3
321	Kipswirl Split Closing 360°	2.5
322	Elevator	2.5
323	Somersault Front Pike	1.4
324	Somersub	1.9
325	Subalina	2.2
326	Subilarc	2.8
327	Ballerina	1.8
328	Lagoon	2.4
330	Aurora	2.3

330a	Aurora ½ Twist	2.7
330c	Aurora Twirl	2.8
330d	Aurora Spinning 180°	2.4
330e	Aurora Spinning 360°	2.4
330f	Aurora Continuous Spin (720°)	2.6
330g	Aurora Twist Spin	2.9
331	Aurora Open 180°	3.0
332	Aurora Open 360°	3.2
335	Gaviata	2.3
336	Gaviata Open 180°	2.4
342	Heron	1.9
342c	Heron Twirl	2.3
342d	Heron Spinning 180°	2.1
342e	Heron Spinning 360°	2.2
342f	Heron Continuous Spin (720°)	2.7
342h	Heron Spin Up 180°	2.4
342i	Heron Spin Up 360°	2.4
343	Butterfly	2.5
344	Neptunus	1.7
345	Catalina Reverse	2.1
346	Side Fishtail Split	2.0
347	Minerva	2.0
348	Tower	1.9
349	Beluga	2.1
350	Dalecarlia	2.6
351	Jupiter	2.8
355	Porpoise	1.8
355a	Porpoise ½ Twist	2.2
355b	Porpoise Full Twist	2.4
355c	Porpoise Twirl	2.3
355d	Porpoise Spinning 180°	1.9
355e	Porpoise Spinning 360°	1.9
355f	Porpoise Continuous Spin (720°)	2.1
355g	Porpoise Twist Spin	2.5
355h	Porpoise Spin Up 180°	2.4
355i	Porpoise Spin Up 360°	2.4

355j	Porpoise Combined Spin (360°+360°)	2.5
360	Walkover Front	1.9
361	Prawn	1.5
362	Surface Prawn	1.3
363	Water Drop	1.5
364	Whirlwind	2.7

CATEGORY IV

401	Swordfish	2.0
402	Swordasub	2.3
403	Swordtail	2.3
405	Swordalina	2.4
406	Swordfish Straight Leg	2.0
410	Hightower	3.4
413	Alba	2.7
420	Walkover Back	1.9
421	Walkover Back Closing 360°	2.2
423	Ariana	2.2
435	Nova	2.2
435c	Nova Twirl	2.7
435d	Nova Spinning 180°	2.3
435e	Nova Spinning 360°	2.3
435f	Nova Continuous Spin (720°)	2.5
435g	Nova Twist Spin	2.8
436	Cyclone	2.4
436c	Cyclone Twirl	2.8
436d	Cyclone Spinning 180°	2.4
436e	Cyclone Spinning 360°	2.4
436f	Cyclone Continuous Spin (720°)	2.7
437	Oceanea	2.1
439	Oceanita	1.8
440	Ipanema	3.0

5.2 NVT Charts (Transition code # and NVT of each transition, and Total NVT and DD) of International Figures

CATEGORY I		Transition code NVT of each transition									Total NVT	DD
101	Ballet Leg Single	1-02	1-12	1-09	1-11							
		10.5	11	11	10.5						43	1.6
102	Ballet Leg Alternate	1-02	1-12	1-09	1-11	1-02	1-12	1-09	1-11			
		10.5	11	11	10.5	10.5	11	11	10.5		86	2.4
103	Submarine Ballet Leg Single	1-02	1-12	5-04	7-06	1-09	1-11					
		10.5	11	13.5	13.5	11	10.5				70	2.1
106	Straight Ballet Leg	1-01	1-09	1-11								
		18.5	11	10.5							40	1.6
110	Ballet Leg Double	1-03	1-18	1-06	1-17							
		3	19	19	3						44	1.7
111	Submarine Ballet Leg Double	1-03	1-18	5-03	7-01	1-06	1-17					
		3	19	16	16	19	3				76	2.2
112	Ibis	1-02	1-12	8-06	2-10	5-10						
		10.5	11	33	20.5	14					89	2.5
112a	Ibis ½ Twist	1-02	1-12	8-06	2-10	9.1-15	5-10					
		10.5	11	33	20.5	21	14				110	2.9
112b	Ibis Full Twist	1-02	1-12	8-06	2-10	9.1-14	5-10					
		10.5	11	33	20.5	32	14				121	3.1
112c	Ibis Twirl	1-02	1-12	8-06	2-10	9.2-06	5-10					
		10.5	11	33	20.5	26	14				115	3.0
112d	Ibis Spinning 180°	1-02	1-12	8-06	2-10	9.3-10						
		10.5	11	33	20.5	18					93	2.6
112e	Ibis Spinning 360°	1-02	1-12	8-06	2-10	9.3-12						
		10.5	11	33	20.5	19					94	2.6
112f	Ibis Continuous Spin (720º)	1-02	1-12	8-06	2-10	9.3-16						
		10.5	11	33	20.5	31					106	2.8
112g	Ibis Twist Spin	1-02	1-12	8-06	2-10	9.5-08						
		10.5	11	33	20.5	48					123	3.1
112h	Ibis Spin Up 180°	1-02	1-12	8-06	2-10	5-09	9.4-05	5-10				
		10.5	11	33	20.5	14	18	14			121	3.1
112i	Ibis Spin Up 360°	1-02	1-12	8-06	2-10	5-09	9.4-06	5-10				
		10.5	11	33	20.5	14	19	14			122	3.1
112j	Ibis Combined Spin	1-02	1-12	8-06	2-10	9.5-04	5-10					
		10.5	11	33	20.5	38	14				127	3.2
113	Crane	1-02	1-12	8-06	9.1-07	2-10	9.1-15	3-40	3-35			
		10.5	11	33	17	20.5	21	37	8		158	3.8
115	Catalina	1-02	1-12	6-03	2-10	5-10						
		10.5	11	24	20.5	14					80	2.3
115a	Catalina ½ Twist	1-02	1-12	6-03	2-10	9.1-15	5-10					
		10.5	11	24	20.5	21	14				101	2.7
115b	Catalina Full Twist	1-02	1-12	6-03	2-10	9.1-14	5-10					
		10.5	11	24	20.5	32	14				112	2.9
115c	Catalina Twirl	1-02	1-12	6-03	2-10	9.2-06	5-10					
		10.5	11	24	20.5	26	14				106	2.8
115d	Catalina Spinning 180°	1-02	1-12	6-03	2-10	9.3-10						
		10.5	11	24	20.5	18					84	2.4
115e	Catalina Spinning 360°	1-02	1-12	6-03	2-10	9.3-12						
		10.5	11	24	20.5	19					85	2.4
115f	Catalina Continuous Spin	1-02	1-12	6-03	2-10	9.3-16						
		10.5	11	24	20.5	31					97	2.6
115g	Catalina Twist Spin	1-02	1-12	6-03	2-10	9.5-08						
		10.5	11	24	20.5	48					114	2.9

115h	Catalina Spin Up 180°	1-02	1-12	6-03	2-10	5-09	9.4-05	5-10				
		10.5	11	24	20.5	14	18	14			112	2.9
115i	Catalina Spin Up 360°	1-02	1-12	6-03	2-10	5-09	9.4-06	5-10				
		10.5	11	24	20.5	14	19	14			113	2.9
115j	Catalina Combined Spin	1-02	1-12	6-03	2-10	9.5-04	5-10					
		10.5	11	24	20.5	38	14				118	3.0
116	Catalarc	1-02	1-12	6-03	2-10	2-20	3-32	3-35				
		10.5	11	24	20.5	17	23	8			114	2.9
117	Catalarc Open 180°	1-02	1-12	6-03	2-10	9.1-18	3-32	3-35				
		10.5	11	24	20.5	20	23	8			117	3.0
118	Helicopter	1-02	1-12	6-03	9.3-09	5-08						
		10.5	11	24	17.5	5					68	2.1
125	Eiffel Tower	1-02	1-12	9.1-01	6-09	2-12	2-10	5-10				
		10.5	11	18.5	8	14.5	20.5	14			97	2.6
125a	Eiffel Tower ½ Twist	1-02	1-12	9.1-01	6-09	2-12	2-10	9.1-15	5-10			
		10.5	11	18.5	8	14.5	20.5	21	14		118	3.0
125b	Eiffel Tower Full Twist	1-02	1-12	9.1-01	6-09	2-12	2-10	9.1-14	5-10			
		10.5	11	18.5	8	14.5	20.5	32	14		129	3.2
125c	Eiffel Tower Twirl	1-02	1-12	9.1-01	6-09	2-12	2-10	9.2-06	5-10			
		10.5	11	18.5	8	14.5	20.5	26	14		123	3.1
125d	Eiffel Tower Spinning 180°	1-02	1-12	9.1-01	6-09	2-12	2-10	9.3-10				
		10.5	11	18.5	8	14.5	20.5	18			101	2.7
125e	Eiffel Tower Spinning 360°	1-02	1-12	9.1-01	6-09	2-12	2-10	9.3-12				
		10.5	11	18.5	8	14.5	20.5	19			102	2.7
125f	Eiffel Tower Continuous Spin	1-02	1-12	9.1-01	6-09	2-12	2-10	9.3-16				
		10.5	11	18.5	8	14.5	20.5	31			114	2.9
125g	Eiffel Tower Twist Spin	1-02	1-12	9.1-01	6-09	2-12	2-10	9.5-08				
		10.5	11	18.5	8	14.5	20.5	48			131	3.3
125h	Eiffel Tower Spin Up 180°	1-02	1-12	9.1-01	6-09	2-12	2-10	5-09	9.4-05	5-10		
		10.5	11	18.5	8	14.5	20.5	14	18	14	129	3.2
125i	Eiffel Tower Spin Up 360°	1-02	1-12	9.1-01	6-09	2-12	2-10	5-09	9.4-06	5-10		
		10.5	11	18.5	8	14.5	20.5	14	19	14	130	3.2
128	Eiffel Walk	1-02	1-12	9.1-01	6-09	2-13	3-32	3-35				
		10.5	11	18.5	8	20	23	8			99	2.7
130	Flamingo	1-02	1-12	1-10	1-14	10-01	5-10					
		10.5	11	13	13	28	14				89.5	2.5
130a	Flamingo ½ Twist	1-02	1-12	1-10	1-14	10-01	9.1-15	5-10				
		10.5	11	13	13	28	21	14			111	2.9
103b	Flamingo Full Twist	1-02	1-12	1-10	1-14	10-01	9.1-14	5-10				
		10.5	11	13	13	28	32	14			122	3.1
130c	Flamingo Twirl	1-02	1-12	1-10	1-14	10-01	9.2-06	5-10				
		10.5	11	13	13	28	26	14			116	3.0
130d	Flamingo Spinning 180°	1-02	1-12	1-10	1-14	10-01	9.3-10					
		10.5	11	13	13	28	18				93.5	2.6
130e	Flamingo Spinning 360°	1-02	1-12	1-10	1-14	10-01	9.3-12					
		10.5	11	13	13	28	19				94.5	2.6
130f	Flamingo Continuous Spin (720°)	1-02	1-12	1-10	1-14	10-01	9.3-16					
		10.5	11	13	13	28	31				107	2.8
130g	Flamingo Twist Spin	1-02	1-12	1-10	1-14	10-01	9.5-08					
		10.5	11	13	13	28	48				124	3.1
130h	Flamingo Spin Up 180°	1-02	1-12	1-10	1-14	10-01	5-09	9.4-05	5-10			
		10.5	11	13	13	28	14	18	14		122	3.1
130i	Flamingo Spin Up 360°	1-02	1-12	1-10	1-14	10-01	5-09	9.4-06	5-10			
		10.5	11	13	13	28	14	19	14		123	3.1
130j	Flamingo Combined Spin (360°+360°)	1-02	1-12	1-10	1-14	10-01	9.5-04	5-10				
		10.5	11	13	13	28	38	14			128	3.2
140	Flamingo Bent Knee	1-02	1-12	1-10	10-02	2-03	5-10					
		10.5	11	13	20	16.5	14				85	2.4

140a	Flamingo Bent Knee ½ Twist	1-02	1-12	1-10	10-02	2-03	9.1-15	5-10				
		10.5	11	13	20	16.5	21	14			106	2.8
140b	Flamingo Bent Knee Full Twist	1-02	1-12	1-10	10-02	2-03	9.1-14	5-10				
		10.5	11	13	20	16.5	32	14			117	3.0
140c	Flamingo Bent Knee Twirl	1-02	1-12	1-10	10-02	2-03	9.2-06	5-10				
		10.5	11	13	20	16.5	26	14			111	2.9
140d	Flamingo Bent Knee Spinning 180°	1-02	1-12	1-10	10-02	2-03	9.3-10					
		10.5	11	13	20	16.5	18				89	2.5
140e	Flamingo Bent Knee Spinning 360°	1-02	1-12	1-10	10-02	2-03	9.3-12					
		10.5	11	13	20	16.5	19				90	2.5
140f	Flamingo Bent Knee Continuous Spin (720°)	1-02	1-12	1-10	10-02	2-03	9.3-16					
		10.5	11	13	20	16.5	31				102	2.7
140g	Flamingo Bent Knee Twist Spin	1-02	1-12	1-10	10-02	2-03	9.5-08					
		10.5	11	13	20	16.5	48				119	3.0
140h	Flamingo Bent Knee Spin Up 180°	1-02	1-12	1-10	10-02	2-03	5-09	9.4-05	5-10			
		10.5	11	13	20	16.5	14	18	14		117	3.0
140i	Flamingo Bent Knee Spin Up 360°	1-02	1-12	1-10	10-02	2-03	5-09	9.4-06	5-10			
		10.5	11	13	20	16.5	14	19	14		118	3.0
140j	Flamingo Bent Knee Combined Spin	1-02	1-12	1-10	10-02	2-03	9.5-04	5-10				
	(360°+360°)	10.5	11	13	20	16.5	38	14			123	3.1
141	Stingray	1-02	1-12	1-10	10-03	2-10	9.1-18	3-32	3-35			
		10.5	11	13	22.5	20.5	20	23	8		129	3.2
142	Manta Ray	1-02	1-12	1-10	10-03	3-17	3-13	3-35				
		10.5	11	13	22.5	36	14.5	8			116	3.0
143	Rio	1-02	1-12	1-10	1-14	5-12	10-08	9.3-13				
		10.5	11	13	13	15	31	30			124	3.1
150	Knight	1-02	1-12	3-09	3-23	9.1-03	3-16	3-13	3-35			
		10.5	11	25	21	15	19	14.5	8		124	3.1
154	London	1-02	1-12	8-16	10-12	5-14						
		10.5	11	7	18	13					59.5	1.9
154j-1	London Combined Spin 360°	1-02	1-12	8-16	10-12	9.5-09	5-14					
		10.5	11	7	18	42	13				102	2.7
154j-2	London Combined Spin 720°	1-02	1-12	8-16	10-12	9.5-10	5-14					
		10.5	11	7	18	50	13				110	2.9

CATEGORY II		Transition code NVT of each transition									Total NVT	DD
226	Swan	3-07 17.5	3-39 14	3-24 14	2-05 14.5	8-09 6					66	2.1
240	Albatross	6-02 11	2-11 15	9.1-03 15	2-03 16.5	5-10 14					71.5	2.2
240a	Albatross ½ Twist	6-02 11	2-11 15	9.1-03 15	9.1-05 16.5	5-10 14					71.5	2.2
240b	Albatross Full Twist	6-02 11	2-11 15	9.1-03 15	9.1-04 22	5-10 14					77	2.3
240c	Albatross Twirl	6-02 11	2-11 15	9.1-03 15	9.2-02 21.5	5-10 14					76.5	2.3
240d	Albatross Spinning 180°	6-02 11	2-11 15	9.1-03 15	9.3-05 15						56	1.9
240e	Albatross Spinning 360°	6-02 11	2-11 15	9.1-03 15	9.3-07 16						57	1.9
240h	Albatross Spin Up 180°	6-02 11	2-11 15	9.1-03 15	5-18 10	9.4-03 15.5	5-10 14				80.5	2.3
240i	Albatross Spin Up 360°	6-02 11	2-11 15	9.1-03 15	5-18 10	9.4-04 16.5	5-10 14				81.5	2.4
240j	Albatross Combined Spin	6-02 11	2-11 15	9.1-03 15	9.5-02 30	5-05 10					81	2.3
241	Goeland	6-02 11	6-07 23	3-30 19	8-09 6						59	1.9

CATEGORY III		Transition code NVT of each transition									Total NVT	DD
301	Barracuda	5-01	10-08	5-11								
		10	31	15							56	1.9
301c	Barracuda Twirl	5-01	10-08	9.2-07	5-11							
		10	31	36	15						92	2.5
301d	Barracuda Spinning 180°	5-01	10-08	9.3-11								
		10	31	28							69	2.1
301e	Barracuda Spinning 360°	5-01	10-08	9.3-13								
		10	31	30							71	2.2
301f	Barracuda Continuous Spin	5-01	10-08	9.3-17								
		10	31	50							91	2.5
301h	Barracuda Spin Up 180°	5-01	10-08	5-11	9.4-05	5-14						
		10	31	15	18	13					87	2.5
301i	Barracuda Spin Up 360°	5-01	10-08	5-11	9.4-06	5-14						
		10	31	15	19	13					88	2.5
302	Blossom	5-02	7-02	3-34	5-08							
		10	11	5	5						31	1.4
303	Somersault Back Pike	8-01	8-05	8-04								
		14	13	6							33	1.5
306	Barracuda Bent Knee	5-01	10-07	5-13								
		10	28	11							49	1.8
306d	Barracuda Bent Knee Spinning 180°	5-01	10-07	9.3-06								
		10	28	18							56	1.9
306e	Barracuda Bent Knee Spinning 360°	5-01	10-07	9.3-22								
		10	28	24							62	2.0
307	Flying Fish	5-01	10-08	2-18	5-11							
		10	31	44	15						100	2.7
307d	Flying Fish Spinning 180°	5-01	10-08	2-18	9.3-11							
		10	31	44	28						113	2.9
307e	Flying Fish Spinning 360°	5-01	10-08	2-18	9.3-13							
		10	31	44	30						115	3.0
308	Barracuda Airborne Split	5-01	10-08	2-16	5-11							
		10	31	43	15						99	2.7
308i	Barracuda Airborne Split Spin Up 360°	5-01	10-08	2-16	5-15	9.4-06	5-14					
		10	31	43	15	19	13				131	3.3
310	Somersault Back Tuck	8-03	8-15	8-13								
		3	5	3							11	1.1
311	Kip	8-03	8-14	10-05	5-10							
		3	2	23	14						42	1.6
311a	Kip ½ Twist	8-03	8-14	10-05	9.1-15	5-10						
		3	2	23	21	14					63	2.0
311b	Kip Full Twist	8-03	8-14	10-05	9.1-14	5-10						
		3	2	23	32	14					74	2.2
311c	Kip Twirl	8-03	8-14	10-05	9.2-06	5-10						
		3	2	23	26	14					68	2.1
311d	Kip Spinning 180°	8-03	8-14	10-05	9.3-10							
		3	2	23	18						46	1.7
311e	Kip Spinning 360°	8-03	8-14	10-05	9.3-12							
		3	2	23	19						47	1.7
311f	Kip Continuous Spin	8-03	8-14	10-05	9.3-16							
		3	2	23	31						59	1.9
311g	Kip Twist Spin	8-03	8-14	10-05	9.5-08							
		3	2	23	48						76	2.2
311h	Kip Spin Up 180°	8-03	8-14	10-05	5-09	9.4-05	5-10					
		3	2	23	14	18	14				74	2.2
311i	Kip Spin Up 360°	8-03	8-14	10-05	5-09	9.4-06	5-10					
		3	2	23	14	19	14				75	2.2

311j	Kip Combined Spin	8-03	8-14	10-05	9.5-04	5-10						
		3	2	23	38	14					80	2.3
312	Kip Split	8-03	8-14	10-05	2-20	3-33	5-10					
		3	2	23	17	20	14				79	2.3
313	Kip Split Closing 180°	8-03	8-14	10-05	2-20	9.1-13	5-10					
		3	2	23	17	21	14				80	2.3
314	Kip Split Open 360°	8-03	8-14	10-05	2-20	9.1-13	9.1-18	3-32	3-35			
		3	2	23	17	21	20	23	8		117	3.0
315	Seagull	8-03	8-14	10-12	2-21	3-41	5-10					
		3	2	18	17	16	14				70	2.1
316	Kipnus	8-03	8-14	10-04	5-06							
		3	2	15	11						31	1.4
317	Kipnus Variant	8-03	8-14	10-04	9.1-04	5-10						
		3	2	15	22	14					56	1.9
318	Kip Bent Knee	8-03	8-14	10-04	2-03	5-10						
		3	2	15	16.5	14					50.5	1.8
319	Kipswirl	8-03	8-14	10-06	5-10							
		3	2	25	14						44	1.7
319c	Kipswirl Twirl	8-03	8-14	10-06	9.2-06	5-10						
		3	2	25	26	14					70	2.1
319d	Kipswirl Spinning 180°	8-03	8-14	10-06	9.3-10							
		3	2	25	18						48	1.7
319e	Kipswirl Spinning 360°	8-03	8-14	10-06	9.3-12							
		3	2	25	19						49	1.8
319f	Kipswirl Continuous Spin	8-03	8-14	10-06	9.3-16							
		3	2	25	31						61	2.0
320	Kipswirl Split Closing 180°	8-03	8-14	10-06	2-20	9.1-22	5-10					
		3	2	25	17	18	14				79	2.3
321	Kipswirl Split Closing 360°	8-03	8-14	10-06	2-20	9.1-21	5-10					
		3	2	25	17	29	14				90	2.5
322	Elevator	8-03	8-14	10-05	5-09	7-12	7-01	1-06	1-17			
		3	2	23	14	10	16	19	3		90	2.5
323	Somersault Front Pike	8-08	8-11	8-12	8-10							
		6	8	8	6						28	1.4
324	Somersub	8-08	8-11	7-03	7-06	1-09	1-11					
		6	8	8	13.5	11	10.5				57	1.9
325	Subalina	8-08	8-11	7-03	6-13	2-10	5-10					
		6	8	8	14.5	20.5	14				71	2.2
326	Subilarc	8-08	8-11	7-03	6-13	2-10	2-20	3-32	3-35			
		6	8	8	14.5	20.5	17	23	8		105	2.8
327	Ballerina	8-08	8-11	7-04	7-09	1-15	1-11					
		6	8	3	10	15	10.5				52.5	1.8
328	Lagoon	8-08	8-11	10-10	2-19	3-27	3-35					
		6	8	19	23.5	18.5	8				83	2.4
330	Aurora	8-08	8-11	10-09	3-24	2-10	5-10					
		6	8	16	14	20.5	14				78.5	2.3
330a	Aurora ½ Twist	8-08	8-11	10-09	3-24	2-10	9.1-15	5-10				
		6	8	16	14	20.5	21	14			99.5	2.7
330c	Aurora Twirl	8-08	8-11	10-09	3-24	2-10	9.2-06	5-10				
		6	8	16	14	20.5	26	14			105	2.8
330d	Aurora Spinning 180°	8-08	8-11	10-09	3-24	2-10	9.3-10					
		6	8	16	14	20.5	18				82.5	2.4
330e	Aurora Spinning 360°	8-08	8-11	10-09	3-24	2-10	9.3-12					
		6	8	16	14	20.5	19				83.5	2.4
330f	Aurora Continuous Spin	8-08	8-11	10-09	3-24	2-10	9.3-16					
		6	8	16	14	20.5	31				95.5	2.6
330g	Aurora Twist Spin	8-08	8-11	10-09	3-24	2-10	9.5-08					
		6	8	16	14	20.5	48				113	2.9

331	Aurora Open 180°	8-08	8-11	10-09	3-24	2-07	9.1-09	3-27	3-35			
		6	8	16	14	21	24	18.5	8		116	3.0
332	Aurora Open 360°	8-08	8-11	10-09	3-24	2-07	9.1-08	3-27	3-35			
		6	8	16	14	21	34	18.5	8		126	3.2
335	Gaviata	8-08	8-11	6-12	2-20	3-32	3-35					
		6	8	19	17	23	8				81	2.3
336	Gaviata Open 180°	8-08	8-11	6-12	9.1-18	3-32	3-35					
		6	8	19	20	23	8				84	2.4
342	Heron	8-08	8-11	7-05	10-11	5-07						
		6	8	5	28	11					58	1.9
342c	Heron Twirl	8-08	8-11	7-05	10-11	9.2-09	5-07					
		6	8	5	28	21	11				79	2.3
342d	Heron Spinning 180°	8-08	8-11	7-05	10-11	9.3-19						
		6	8	5	28	23					70	2.1
342e	Heron Spinning 360°	8-08	8-11	7-05	10-11	9.3-20						
		6	8	5	28	29					76	2.2
342f	Heron Continuous Spin	8-08	8-11	7-05	10-11	9.3-21						
		6	8	5	28	52					99	2.7
342h	Heron Spin Up 180°	8-08	8-11	7-05	10-11	5-16	9.4-01	5-17				
		6	8	5	28	11	14	11			83	2.4
342i	Heron Spin Up 360°	8-08	8-11	7-05	10-11	5-16	9.4-02	5-17				
		6	8	5	28	11	15	11			84	2.4
343	Butterfly	8-08	2-12	2-09	6-11	2-10	5-10					
		6	14.5	20	16.5	20.5	14				91.5	2.5
344	Neptunus	8-08	2-12	2-04	5-06							
		6	14.5	13.5	11						45	1.7
345	Catalina Reverse	8-08	2-12	6-05	1-09	1-11						
		6	14.5	24	11	10.5					66	2.1
346	Side Fishtail Split	8-08	6-07	3-33	5-10							
		6	23	20	14						63	2.0
347	Minerva	8-08	6-07	6-10	5-05							
		6	23	22	10						61	2.0
348	Tower	8-08	2-12	2-10	5-10							
		6	14.5	20.5	14						55	1.9
349	Beluga	8-08	2-12	2-07	3-27	3-35						
		6	14.5	21	18.5	8					68	2.1
350	Dalecarlia	8-08	2-12	2-06	3-21	1-09	1-11					
		6	14.5	31	22	11	10.5				95	2.6
351	Jupiter	8-08	2-12	2-06	3-25	2-10	5-10					
		6	14.5	31	18	20.5	14				104	2.8
355	Porpoise	8-08	2-14	5-10								
		6	33	14							53	1.8
355a	Porpoise ½ Twist	8-08	2-14	9.1-15	5-10							
		6	33	21	14						74	2.2
355b	Porpoise Full Twist	8-08	2-14	9.1-14	5-10							
		6	33	32	14						85	2.4
355c	Porpoise Twirl	8-08	2-14	9.2-06	5-10							
		6	33	26	14						79	2.3
355d	Porpoise Spinning 180°	8-08	2-14	9.3-10								
		6	33	18							57	1.9
355e	Porpoise Spinning 360°	8-08	2-14	9.3-12								
		6	33	19							58	1.9
355f	Porpoise Continuous Spin	8-08	2-14	9.3-16								
		6	33	31							70	2.1
355g	Porpoise Twist Spin	8-08	2-14	9.5-08								
		6	33	48							87	2.5
355h	Porpoise Spin Up 180°	8-08	2-14	5-09	9.4-05	5-10						
		6	33	14	18	14					85	2.4

355i	Porpoise Spin Up 360°	8-08	2-14	5-09	9.4-06	5-10						
		6	33	14	19	14					86	2.4
355j	Porpoise Combined Spin	8-08	2-14	9.5-04	5-10							
		6	33	38	14						91	2.5
360	Walkover Front	8-08	2-13	3-32	3-35							
		6	20	23	8						57	1.9
361	Prawn	8-08	2-13	3-34	5-08							
		6	20	5	5						36	1.5
362	Surface Prawn	8-08	3-20	3-34	5-08							
		6	9	5	5						25	1.3
363	Water Drop	8-08	2-11	9.3-05								
		6	15	15							36	1.5
364	Whirlwind	8-08	2-12	9.1-06	9.3-08							
		6	14.5	50	29.5						100	2.7

CATEGORY IV		Transition code									Total	DD
		NVT of each transition									NVT	
401	Swordfish	1-16	3-11	3-13	3-35							
		4	35	14.5	8						61.5	2.0
402	Swordasub	1-16	3-10	3-04	1-09	1-11						
		4	29	24.5	11	10.5					79	2.3
403	Swordtail	1-16	3-10	3-05	3-27	3-35						
		4	29	20	18.5	8					79.5	2.3
405	Swordalina	1-16	3-10	6-01	7-08	1-09	1-11					
		4	29	21	10.5	11	10.5				86	2.4
406	Swordfish Straight Leg	3-19	3-32	3-35								
		33	23	8							64	2.0
410	Hightower	3-18	3-06	2-10	5-10	7-11	10-08	5-11				
		30.5	14	20.5	14	12	31	15			137	3.4
413	Alba	3-18	3-06	6-06	1-06	1-17						
		30.5	14	31.5	19	3					98	2.7
420	Walkover Back	3-08	3-37	3-30	8-09							
		12	22	19	6						59	1.9
421	Walkover Back Closing 360°	3-08	3-37	9.1-12	5-10							
		12	22	27	14						75	2.2
423	Ariana	3-08	3-37	9.1-11	3-32	3-35						
		12	22	10	23	8					75	2.2
435	Nova	3-07	3-12	9.1-04	5-10							
		17.5	21	22	14						74.5	2.2
435c	Nova Twirl	3-07	3-12	9.1-04	9.2-06	5-10						
		17.5	21	22	26	14					101	2.7
435d	Nova Spinning 180°	3-07	3-12	9.1-04	9.3-10							
		17.5	21	22	18						78.5	2.3
435e	Nova Spinning 360°	3-07	3-12	9.1-04	9.3-12							
		17.5	21	22	19						79.5	2.3
435f	Nova Continuous Spin	3-07	3-12	9.1-04	9.3-16							
		17.5	21	22	31						91.5	2.5
435g	Nova Twist Spin	3-07	3-12	9.1-04	9.5-08							
		17.5	21	22	48						109	2.8
436	Cyclone	3-07	3-14	9.1-15	5-10							
		17.5	29	21	14						81.5	2.4
436c	Cyclone Twirl	3-07	3-14	9.1-15	9.2-06	5-10						
		17.5	29	21	26	14					108	2.8
436d	Cyclone Spinning 180°	3-07	3-14	9.1-15	9.3-10							
		17.5	29	21	18						85.5	2.4
436e	Cyclone Spinning 360°	3-07	3-14	9.1-15	9.3-12							
		17.5	29	21	19						86.5	2.4
436f	Cyclone Continuous Spin	3-07	3-14	9.1-15	9.3-16							
		17.5	29	21	31						98.5	2.7
437	Oceanea	3-07	3-15	9.3-16								
		17.5	21	31							69.5	2.1
439	Oceanita	3-07	3-15	5-10								
		17.5	21	14							52.5	1.8
440	Ipanema	3-07	3-15	2-22	6-14	5-10						
		17.5	21	33	33	14					119	3.0

5.3 NVT Charts (Illustration, NVT, PV of each transition, and Total NVT and DD) of International Figures

CATEGORY I

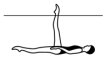
101 Ballet Leg, Single - 1.6

								Total
NVT=	10.5	11.0	11.0	10.5				43
PV =	2.44	2.56	2.56	2.44				1.64 (DD)

102 Ballet Leg, Alternate – 2.4

									Total
NVT=	10.5	11.0	11.0	10.5	10.5	11.0	11.0	10.5	86
PV =	1.22	1.28	1.28	1.22	1.22	1.28	1.28	1.22	2.43

103 Submarine, Single Ballet Leg - 2.1

								Total
NVT=	10.5	11.0	13.5	13.5	11.0	10.5		70
PV =	1.50	1.57	1.93	1.93	1.57	1.50		2.14

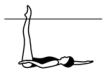
106 Ballet Leg, Straight - 1.6

							Total
NVT=	18.5	11.0	10.5				40
PV =	4.63	2.75	2.63				1.59

110 Ballet Leg, Double – 1.7

								Total
NVT=	3.0	19.0	19.0	3.0				44
PV =	0.68	4.32	4.32	0.68				1.66

111 Submarine Ballet Leg, Double – 2.2

								Total
NVT=	3.0	19.0	16.0	16.0	19.0	3.0		76
PV =	0.39	2.50	2.11	2.11	2.50	0.39		2.249

112 Ibis - 2.5

								Total
NVT=	10.5	11.0	33.0	20.5	14.0			89
PV =	1.18	1.24	3.71	2.30	1.57			2.49

112a Ibis, Half Twist - 2.9

								Total
NVT=	10.5	11.0	33.0	20.5	21.0	14.0		110
PV =	0.95	1.0	3.0	1.86	1.91	1.27		2.88

112b Ibis, Full Twist – 3.1

								Total
NVT=	10.5	11.0	33.0	20.5	32.0	14.0		121
PV =	0.87	0.91	2.73	1.69	2.64	1.16		3.08

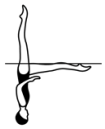
112c Ibis, Twirl – 3.0

								Total
NVT=	10.5	11.0	33.0	20.5	26.0	14.0		115
PV =	0.91	0.96	2.87	1.78	2.26	1.22		2.97

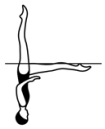
112d Ibis, Spinning 180 - 2.6

								Total
NVT=	10.5	11.0	33.0	20.5	18.0	0		93
PV =	1.13	1.18	3.55	2.20	1.94	0.0		2.56

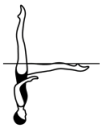
112e Ibis, Spinning 360 - 2.6

								Total
NVT=	10.5	11.0	33.0	20.5	19.0	0		94
PV =	1.12	1.17	3.51	2.18	2.02			2.58

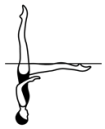
112f Ibis, Continuous Spin - 2.8

								Total
NVT=	10.5	11.0	33.0	20.5	31.0			106
PV =	0.99	1.04	3.11	1.93	2.92			2.8

112g Ibis, Twist Spin - 3.1

							Total
NVT=	10.5	11.0	33.0	20.5	48.0		123
PV =	0.85	0.89	2.68	1.67	3.90		3.12

112h Ibis, Spin Up 180 – 3.1

								Total
NVT=	10.5	11.0	33.0	20.5	14.0	18.0	14.0	121
PV =	0.87	0.91	2.73	1.69	1.16	1.49	1.16	3.08

112i Ibis, Spin Up 360 – 3.1

								Total
NVT=	10.5	11.0	33.0	20.5	14.0	19.0	14.0	122
PV =	0.86	0.90	2.70	1.68	1.15	1.56	1.15	3.1

112j Ibis, Combined Spin - 3.2

								Total
NVT=	10.5	11.0	33.0	20.5	38.0	14.0		127
PV =	0.83	0.87	2.60	1.61	2.99	1.10		3.19

113 Crane - 3.8

									Total
NVT=	10.5	11.0	33.0	17.0	20.5	21.0	37.0	8.0	158
PV =	0.66	0.70	2.09	1.08	1.30	1.33	2.34	0.51	3.76

115 Catalina - 2.3

								Total
NVT=	10.5	11.0	24.0	20.5	14.0			80
PV =	1.31	1.38	3.00	2.56	1.75			2.32

115a Catalina, Half Twist - 2.7

								Total
NVT=	10.5	11.0	24.0	20.5	21.0	14.0		101
PV =	1.04	1.09	2.38	2.03	2.08	1.39		2.71

115b Catalina, Full Twist - 2.9

								Total
NVT=	10.5	11.0	24.0	20.5	32.0	14.0		112
PV =	0.94	0.98	2.14	1.83	2.86	1.25		2.91

115c Catalina, Twirl - 2.8

								Total
NVT=	10.5	11.0	24.0	20.5	26.0	14.0		106
PV =	0.99	1.04	2.26	1.93	2.45	1.32		2.8

115d Catalina, Spinning 180 - 2.4

								Total
NVT=	10.5	11.0	24.0	20.5	18.0	0		84
PV =	1.25	1.31	2.86	2.44	2.14	0		2.4

115e Catalina, Spinning 360 - 2.4

								Total
NVT=	10.5	11.0	24.0	20.5	19.0	0		85
PV =	1.24	1.29	2.82	2.41	2.24	0		2.42

115f Catalina, Continuous Spin - 2.6

								Total
NVT=	10.5	11.0	24.0	20.5	31.0			97
PV =	1.08	1.13	2.47	2.11	3.20			2.64

115g Catalina, Twist Spin – 2.9

								Total
NVT=	10.5	11.0	24.0	20.5	48.0			114
PV =	0.92	0.96	2.11	1.80	4.21			2.949

115h Catalina, Spin Up 180 - 2.9

								Total
NVT=	10.5	11.0	24.0	20.5	14.0	18.0	14.0	112
PV =	0.94	0.98	2.14	1.83	1.25	1.61	1.25	2.91

115i Catalina, Spin Up 360 - 2.9

								Total
NVT=	10.5	11.0	24.0	20.5	14.0	19.0	14.0	113
PV =	0.93	0.97	2.12	1.81	1.24	1.68	1.24	2.93

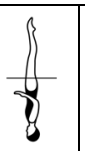
115j Catalina, Combined Spin - 3.0

							Total
NVT=	10.5	11.0	24.0	20.5	38.0	14.0	118
PV =	0.89	0.93	2.03	1.74	3.22	1.19	3.02

116 Catalarc – 2.9

								Total
NVT=	10.5	11.0	24.0	20.5	17.0	23.0	8.0	114
PV =	0.92	0.96	2.11	1.80	1.49	2.02	0.70	2.949

117 Catalarc Open 180 – 3.0

								Total
NVT=	10.5	11.0	24.0	20.5	20.0	23.0	8.0	117
PV =	0.90	0.94	2.05	1.75	1.71	1.97	0.68	3.0

118 Helicopter – 2.1

							Total
NVT=	10.5	11.0	24.0	17.5	5.0		68
PV =	1.54	1.62	3.53	2.57	0.74		2.1

125 Eiffel Tower – 2.6

								Total
NVT=	10.5	11.0	18.5	8.0	14.5	20.5	14.0	97
PV =	1.08	1.13	1.91	0.82	1.49	2.11	1.44	2.64

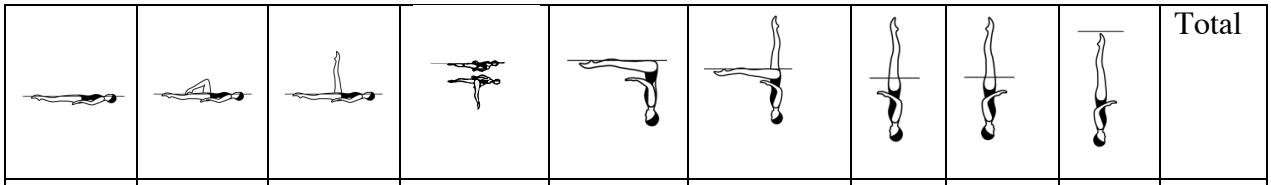
125a Eiffel Tower, Half Twist – 3.0

									Total
NVT=	10.5	11.0	18.5	8.0	14.5	20.5	21.0	14.0	118
PV =	0.89	0.93	1.57	0.68	1.23	1.74	1.78	1.19	3.02

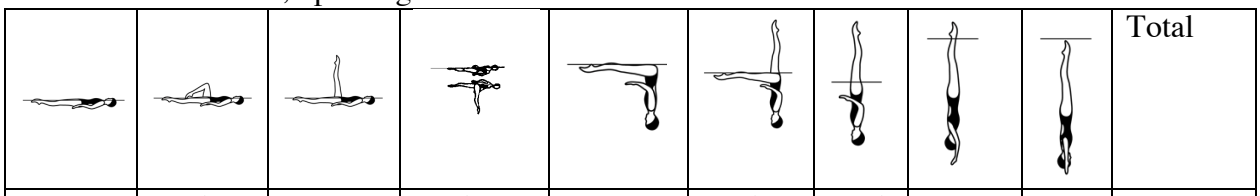
125b Eiffel Tower, Full Twist – 3.2

									Total
NVT=	10.5	11.0	18.5	8.0	14.5	20.5	32.0	14.0	129
PV =	0.81	0.85	1.43	0.62	1.12	1.59	2.48	1.09	3.23

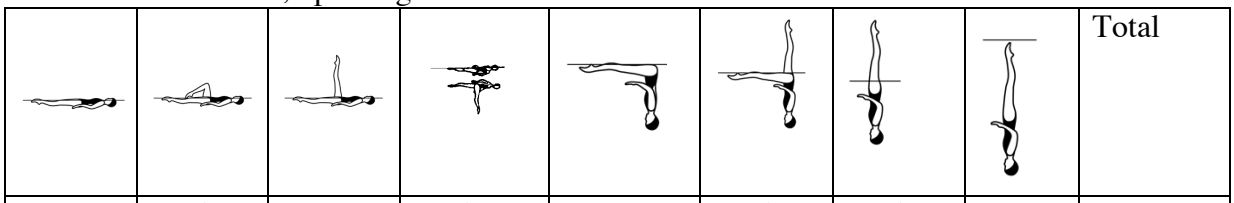
125c Eiffel Tower, Twirl – 3.1

									Total
NVT=	10.5	11.0	18.5	8.0	14.5	20.5	26.0	14.0	123
PV =	0.85	0.89	1.50	0.65	1.18	1.67	2.11	1.14	3.12

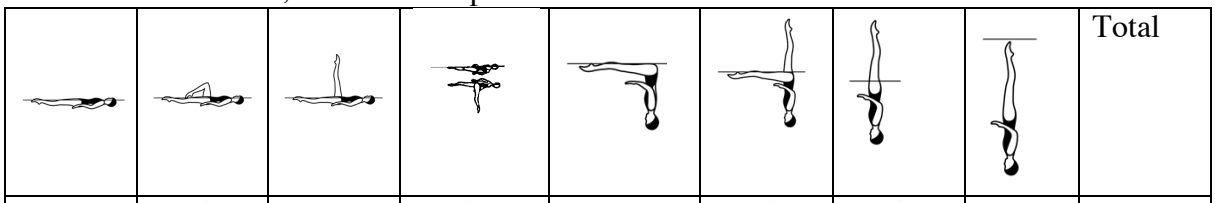
125d Eiffel Tower, Spinning 180 – 2.7

									Total
NVT=	10.5	11.0	18.5	8.0	14.5	20.5	18	0	101
PV =	1.04	1.09	1.83	0.79	1.44	2.03	1.78	0.0	2.71

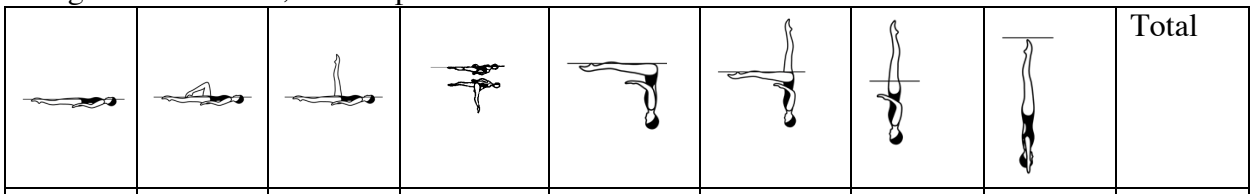
125e Eiffel Tower, Spinning 360 – 2.7

								Total
NVT=	10.5	11.0	18.5	8.0	14.5	20.5	19.0	102
PV =	1.03	1.08	1.81	0.78	1.42	2.01	1.86	2.73

125f Eiffel Tower, Continuous Spin – 2.9

								Total
NVT=	10.5	11.0	18.5	8.0	14.5	20.5	31.0	114
PV =	0.92	0.96	1.62	0.70	1.27	1.80	2.72	2.949

125g Eiffel Tower, Twist Spin – 3.3

								Total
NVT=	10.5	11.0	18.5	8.0	14.5	20.5	48.0	131
PV =	0.80	0.84	1.41	0.61	1.11	1.56	3.66	3.26

125h Eiffel Tower, Spin Up 180 – 3.2

										Total
NVT=	10.5	11.0	18.5	8.0	14.5	20.5	14.0	18.0	14.0	129
PV =	0.81	0.85	1.43	0.62	1.12	1.59	1.09	1.40	1.09	3.23

125i Eiffel Tower, Spin Up 360 – 3.2

										Total
NVT=	10.5	11.0	18.5	8.0	14.5	20.5	14.0	19.0	14.0	130
PV =	0.81	0.85	1.42	0.62	1.12	1.58	1.08	1.46	1.08	3.24

128 Eiffel Walk – 2.7

NVT=	10.5	11.0	18.5	8.0	20.0	23.0	8.0	99
PV =	1.06	1.11	1.87	0.81	2.02	2.32	0.81	2.67

130 Flamingo – 2.5

								Total
NVT=	10.5	11.0	13.0	13.0	28.0	14.0		89.5
PV =	1.17	1.23	1.45	1.45	3.13	1.56		2.5

130a Flamingo, Half Twist – 2.9

								Total
NVT=	10.5	11.0	13.0	13.0	28.0	21.0	14.0	110.5
PV =	0.95	1.00	1.18	1.18	2.53	1.90	1.27	2.88

130b Flamingo, Full Twist – 3.1

								Total
NVT=	10.5	11.0	13.0	13.0	28.0	32.0	14.0	121.5
PV =	0.86	0.91	1.07	1.07	2.30	2.63	1.15	3.09

130c Flamingo, Twirl – 3.0

								Total
NVT=	10.5	11.0	13.0	13.0	28.0	26.0	14.0	115.5
PV =	0.91	0.95	1.13	1.13	2.42	2.25	1.21	2.98

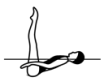
130d Flamingo, Spinning 180 – 2.6

								Total
NVT=	10.5	11.0	13.0	13.0	28.0	18.0	0	93.5
PV =	1.12	1.18	1.39	1.39	2.99	1.93	0.0	2.57

130e Flamingo, Spinning 360 – 2.6

								Total
NVT=	10.5	11.0	13.0	13.0	28.0	19.0	0	94.5
PV =	1.11	1.16	1.38	1.38	2.96	2.01	0.0	2.59

130f Flamingo, Continuous Spin – 2.8

								Total
NVT=	10.5	11.0	13.0	13.0	28.0	31.0		106.5
PV =	0.99	1.03	1.22	1.22	2.63	2.91		2.81

130g Flamingo, Twist Spin – 3.1

								Total
NVT=	10.5	11.0	13.0	13.0	28.0	48.0		123.5
PV =	0.85	0.89	1.05	1.05	2.27	3.89		3.12

130h Flamingo, Spin Up 180 – 3.1

									Total
NVT=	10.5	11.0	13.0	13.0	28.0	14.0	18.0	14.0	121.5
PV =	0.86	0.91	1.07	1.07	2.3	1.15	1.48	1.15	3.09

130i Flamingo, Spin Up 360 – 3.1

									Total
NVT=	10.5	11.0	13.0	13.0	28.0	14.0	19.0	14.0	122.5
PV =	0.86	0.9	1.06	1.06	2.29	1.14	1.55	1.14	3.11

130j Flamingo, Combined Spin – 3.2

								Total
NVT=	10.5	11.0	13.0	13.0	28.0	38.0	14.0	127.5
PV =	0.82	0.86	1.02	1.02	2.20	2.98	1.10	3.2

140 Flamingo, Bent Knee – 2.4

								Total
NVT=	10.5	11.0	13.0	20.0	16.5	14.0		85
PV =	1.24	1.29	1.53	2.35	1.94	1.65		2.42

140a Flamingo, Bent Knee, Half Twist – 2.8

								Total
NVT=	10.5	11.0	13.0	20.0	16.5	21.0	14.0	106
PV =	0.99	1.04	1.23	1.89	1.56	1.98	1.32	2.8

140b Flamingo, Bent Knee, Full Twist – 3.0

								Total
NVT=	10.5	11.0	13.0	20.0	16.5	32.0	14.0	117
PV =	0.90	0.94	1.11	1.71	1.41	2.74	1.20	3.0

140c Flamingo, Bent Knee, Twirl – 2.9

								Total
NVT=	10.5	11.0	13.0	20.0	16.5	26.0	14.0	111
PV =	0.95	0.99	1.17	1.80	1.49	2.34	1.26	2.89

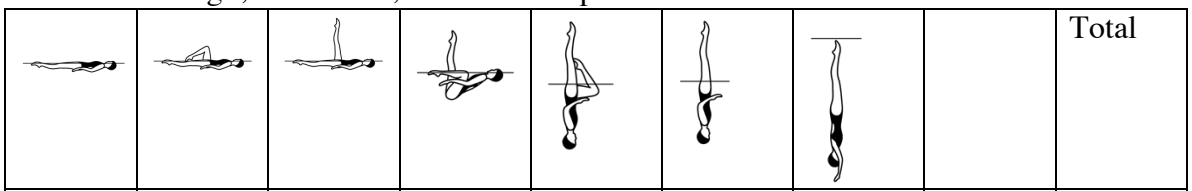
140d Flamingo, Bent Knee, Spinning 180 – 2.5

								Total
NVT=	10.5	11.0	13.0	20.0	16.5	18.0	0.0	89
PV =	1.18	1.24	1.46	2.25	1.85	2.02		2.49

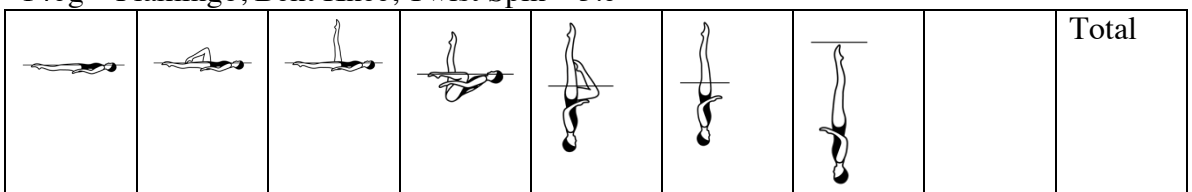
140e Flamingo, Bent Knee, Spinning 360 – 2.5

								Total
NVT=	10.5	11.0	13.0	20.0	16.5	19.0	0.0	90
PV =	1.17	1.22	1.44	2.22	1.83	2.11	0.0	2.51

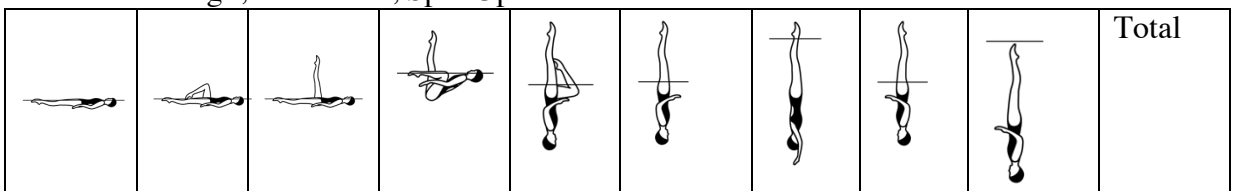
140f Flamingo, Bent Knee, Continuous Spin – 2.7

								Total
NVT=	10.5	11.0	13.0	20.0	16.5	31.0		102
PV =	1.03	1.08	1.27	1.96	1.62	3.04		2.73

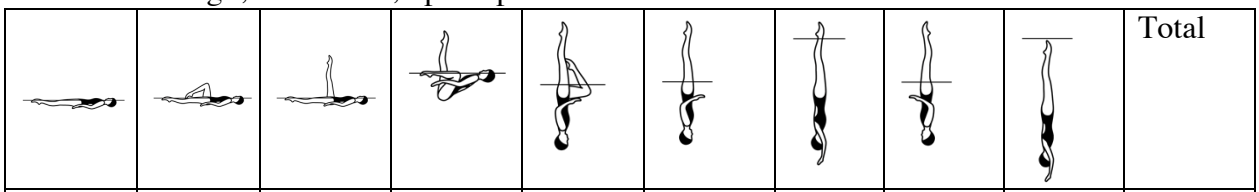
140g Flamingo, Bent Knee, Twist Spin – 3.0

								Total
NVT=	10.5	11.0	13.0	20.0	16.5	48.0		119
PV =	0.88	0.92	1.09	1.68	1.39	4.03		3.04

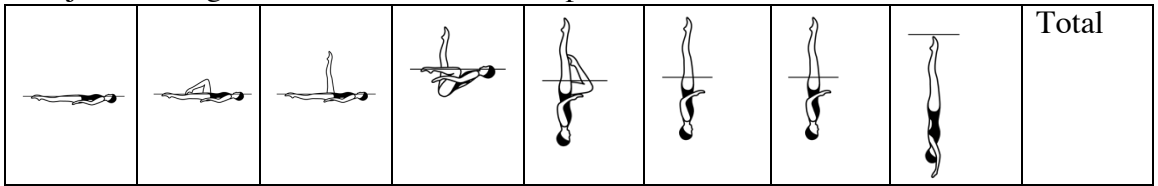
140h Flamingo, Bent Knee, Spin Up 180 – 3.0

									Total
NVT=	10.5	11.0	13.0	20.0	16.5	14.0	18.0	14.0	117
PV =	0.90	0.94	1.11	1.71	1.41	1.20	1.54	1.20	3.00

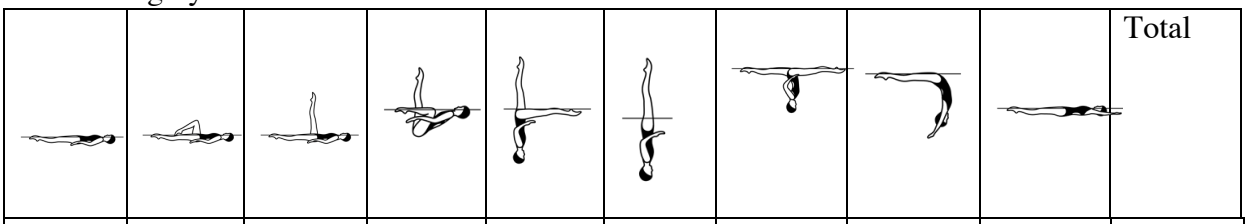
140i Flamingo, Bent Knee, Spin Up 360 – 3.0

									Total
NVT=	10.5	11.0	13.0	20.0	16.5	14.0	19.0	14.0	118
PV =	0.89	0.93	1.10	1.69	1.40	1.19	1.61	1.19	3.02

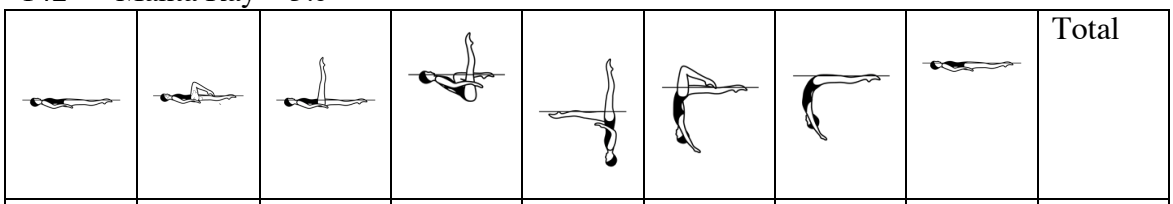
140j Flamingo, Bent Knee, Combined Spin – 3.1

							Total
NVT=	10.5	11.0	13.0	20.0	16.5	38.0	14.0	123
PV =	0.85	0.89	1.06	1.63	1.34	3.09	1.14	3.12

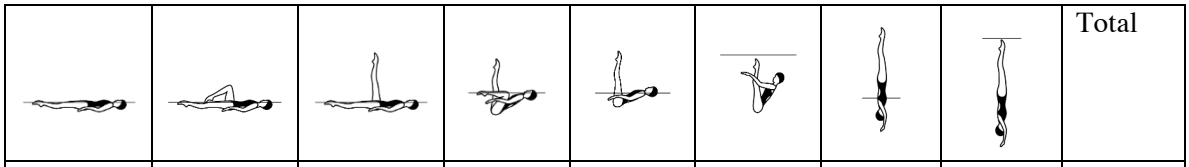
141 Stingray - 3.2

									Total
NV=	10.5	11.0	13.0	22.5	20.5	20.0	23.0	8.0	128.5
% =	0.82	0.86	1.01	1.75	1.60	1.56	1.79	0.62	3.22

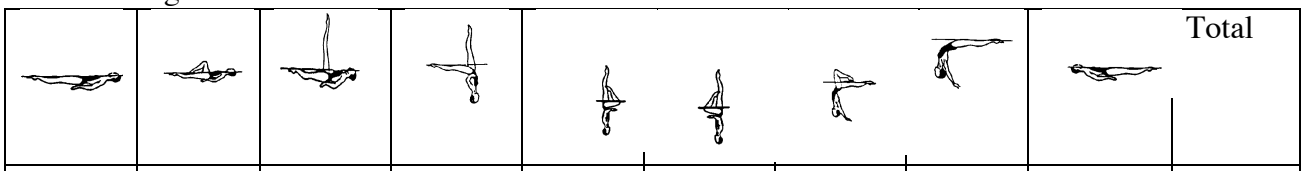
142 Manta Ray – 3.0

								Total
NVT=	10.5	11.0	13.0	22.5	36.0	14.5	8.0	115.5
PV =	0.91	0.95	1.13	1.95	3.12	1.26	0.69	2.98

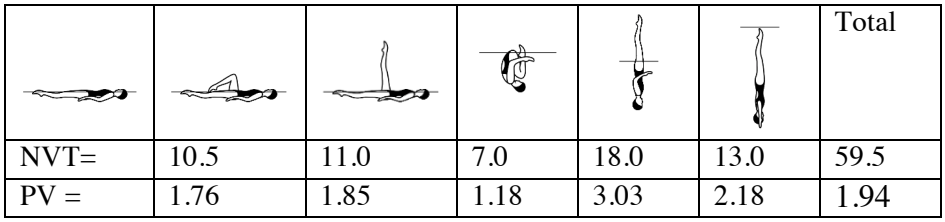
143 Rio 3.1

								Total
NVT=	10.5	11.0	13.0	13.0	15.0	31.0	30.0	123.5
PV =	0.85	0.89	1.05	1.05	1.21	2.51	2.43	3.12

150 Knight – 3.1

								Total
NVT=	10.5	11.0	25.0	21.0	15.0	19.0	14.5	8.0	124
PV =	0.85	0.89	2.02	1.69	1.21	1.53	1.17	0.65	3.13

154 London – 1.9

						Total
NVT=	10.5	11.0	7.0	18.0	13.0	59.5
PV =	1.76	1.85	1.18	3.03	2.18	1.94

154j-1 London Combined Spin 360 – 2.7

							Total
NVT=	10.5	11.0	7.0	18.0	42.0	13.0	101.5
PV =	1.03	1.08	0.69	1.77	4.14	1.28	2.72

154j-2 London Combined Spin 720° - 2.9

							Total
NVT=	10.5	11.0	7.0	18.0	50.0	13.0	109.5
PV =	0.96	1.00	0.64	1.64	4.57	1.19	2.87

CATEGORY II

226 Swan - 2.1

							Total
NVT=	17.5	14.0	14.0	14.5	6.0		66
PV =	2.65	2.12	2.12	2.20	0.91		2.07(DD)

240 Albatross – 2.2

								Total
NVT=	11.0	15.0	15.0	16.5	14.0			71.5
PV =	1.54	2.10	2.10	2.31	1.96			2.17

240a Albatross, Half Twist – 2.2

								Total
NVT=	11.0	15.0	15.0	16.5	14.0			71.5
PV =	1.54	2.10	2.10	2.31	1.96			2.17

240b Albatross, Full Twist – 2.3

								Total
NVT=	11.0	15.0	15.0	22.0	14.0			77
PV =	1.43	1.95	1.95	2.86	1.82			2.27

240c Albatross, Twirl – 2.3

								Total
NVT=	11.0	15.0	15.0	21.5	14.0			76.5
PV =	1.44	1.96	1.96	2.81	1.83			2.26

240d Albatross, Spinning 180° – 1.9

								Total
NVT=	11.0	15.0	15.0	15.0	0.0			56
PV =	1.96	2.68	2.68	2.68	0.0			1.88

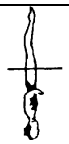
240e Albatross, Spinning 360° – 1.9

								Total
NVT=	11.0	15.0	15.0	16.0	0.0			57
PV =	1.93	2.63	2.63	2.81	0.0			1.9

240h Albatross, Spin Up 180º – 2.3

								Total
NVT=	11.0	15.0	15.0	10.0	15.5	14.0		80.5
PV =	1.37	1.86	1.86	1.24	1.93	1.74		2.33

240i Albatross, Spin Up 360º – 2.4

								Total
NVT=	11.0	15.0	15.0	10.0	16.5	14.0		81.5
PV =	1.35	1.84	1.84	1.23	2.02	1.72		2.35

240j Albatross, Combined Spin – 2.3

							Total
NVT=	11.0	15.0	15.0	30.0	10.0		81
PV =	1.36	1.85	1.85	3.70	1.23		2.34

241 Goeland – 1.9

								Total
NVT=	11.0	23.0	19.0	6.0				59
PV =	1.86	3.90	3.22	1.02				1.94

CATEGORY III

301 Barracuda - 1.9

							Total
NVT=	10.0	31.0	15.0				56
PV =	1.79	5.54	2.68				1.88 (DD)

301c Barracuda, Twirl – 2.5

								Total
NVT=	10.0	31.0	36.0	15.0				92
PV =	1.09	3.37	3.91	1.63				2.54

301 Barracuda, Spinning 180 – 2.1

								Total
NVT=	10.0	31.0	28.0	0.0				69
PV =	1.45	4.49	4.06	0.0				2.12

301e Barracuda, Spinning 360 – 2.2

								Total
NVT=	10.0	31.0	30.0	0.0				71
PV =	1.41	4.37	4.23	0.0				2.16

301f Barracuda, Continuous Spin – 2.5

								Total
NVT=	10.0	31.0	50.0					91
PV =	1.10	3.41	5.49					2.5

301h Barracuda, Spin Up 180 – 2.5

								Total
NVT=	10.0	31.0	15.0	18.0	13.0			87
PV =	1.15	3.56	1.72	2.07	1.49			2.45

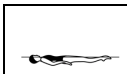
301i Barracuda, Spin Up 360 – 2.5

								Total
NVT=	10.0	31.0	15.0	19.0	13.0			88
PV =	1.14	3.52	1.70	2.16	1.48			2.47

302 Blossom – 1.4

								Total
NVT=	10.0	11.0	5.0	5.0				31
PV =	3.23	3.55	1.61	1.61				1.42

303 Somersault, Back Pike – 1.5

								Total
NVT=	14.0	13.0	6.0					33
PV =	4.24	3.94	1.82					1.46

306 Barracuda Bent Knee - 1.8

							Total
NVT=	10.0	28.0	11.0				49
PV =	2.04	5.71	2.24				1.75

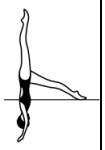
306d Barracuda Bent Knee, Spinning 180 - 1.9

							Total
NVT=	10.0	28.0	18.0	0.0			56
PV =	1.79	5.00	3.21				1.88

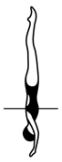
306e Barracuda Bent Knee, Spinning 360 - 2.0

							Total
NVT=	10.0	28.0	24.0	0.0			62
PV =	1.61	4.52	3.87				1.99

307 Flying Fish – 2.7

								Total
NVT=	10.0	31.0	44.0	15.0				100
PV =	1.00	3.10	4.40	1.50				2.69

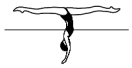
307d Flying Fish, Spinning 180º – 2.9

							Total
NVT=	10.0	31.0	44.0	28.0	0.0		113
PV =	0.88	2.74	3.89	2.48	0.0		2.93

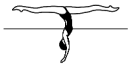
307e Flying Fish, Spinning 360º - 3.0

							Total
NVT=	10.0	31.0	44.0	30.0	0.0		115
PV =	0.8	2.70	3.83	2.61	0.0		2.97

308 Barracuda, Airborne Split – 2.7

								Total
NVT=	10.0	31.0	43.0	0	15.0			99
PV =	1.01	3.13	4.34	0.0	1.52			2.67

308i Barracuda, Airborne Split Spin Up 360º – 3.3

								Total
NVT=	10.0	31.0	43.0	-	15.0	19.0	13.0	131
PV =	0.76	2.37	3.28	-	1.15	1.45	0.99	3.26

310 Somersault, Back Tuck – 1.1

							Total
NVT=	3.0	5.0	3.0				11
PV =	2.73	4.55	2.73				1.05

311 Kip - 1.6

								Total
NVT=	3.0	2.0	23.0	14.0				42
PV =	0.71	0.48	5.48	3.33				1.62

311a Kip, Half Twist - 2.0

								Total
NVT=	3.0	2.0	23.0	21.0	14.0			63
PV =	0.48	0.32	3.65	3.33	2.22			2.01

311 Kip, Full Twist – 2.2

								Total
NVT=	3.0	2.0	23.0	32.0	14.0			74
PV =	0.41	0.27	3.11	4.32	1.89			2.21

311c Kip, Twirl – 2.1

								Total
NVT=	3.0	2.0	23.0	26.0	14.0			68
PV =	0.44	0.29	3.38	3.82	2.06			2.10

311d Kip, Spinning 180 - 1.7

								Total
NVT=	3.0	2.0	23.0	18.0	0.0			46
PV =	0.65	0.43	5.00	3.91	0.0			1.7

311e Kip, Spinning 360 – 1.7

								Total
NVT=	3.0	2.0	23.0	19.0				47
PV =	0.64	0.43	4.89	4.04				1.72

311f Kip, Continuous Spin – 1.9

								Total
NVT=	3.0	2.0	23.0	31.0				59
PV =	0.51	0.34	3.90	5.25				1.94

311g Kip, Twist Spin – 2.2

								Total
NVT=	3.0	2.0	23.0	48.0				76
PV =	0.39	0.26	3.03	6.32				2.249

311h Kip, Spin Up 180 – 2.2

								Total
NVT=	3.0	2.0	23.0	14.0	18.0	14.0		74
PV =	0.41	0.27	3.11	1.89	2.43	1.89		2.21

311i Kip, Spin Up 360 – 2.2

								Total
NVT=	3.0	2.0	23.0	14.0	19.0	14.0		75
PV =	0.40	0.27	3.07	1.87	2.53	1.87		2.23

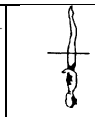
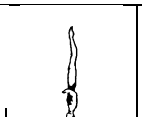
311j Kip, Combined Spin – 2.3

							Total
NVT=	3.0	2.0	23.0	38.0	14.0		80
PV =	0.38	0.25	2.88	4.75	1.75		2.32

312 Kip Split – 2.3

								Total
NVT=	3.0	2.0	23.0	17.0	20.0	14.0		79
PV =	0.38	0.25	2.91	2.15	2.53	1.77		2.3

313 Kip Split Closing 180 – 2.3

								Total
NVT=	3.0	2.0	23.0	17.0	21.0	14.0		80
PV =	0.38	0.25	2.88	2.13	2.63	1.75		2.32

314 Kip Split Open 360 – 3.2

									Total
NVT=	3.0	2.0	23.0	17.0	21.0	20.0	23.0	8.0	117
PV =	0.26	0.17	1.97	1.45	1.79	1.71	1.97	0.68	3.0

315 Seagull – 2.1

								Total
NVT=	3.0	2.0	18.0	17.0	16.0	14.0		70
PV =	0.43	0.29	2.57	2.43	2.29	2.00		2.14

316 Kipnus – 1.4

						Total
NVT=	3.0	2.0	15.0	11.0		31
PV =	0.97	0.65	4.84	3.55		1.42

317 Kipnus Variant – 1.9

							Total
NVT=	3.0	2.0	15.0	22.0	14.0		56
PV =	0.54	0.36	2.68	3.93	2.50		1.88

318 Kipnus Bent Knee – 1.8

							Total
NVT=	3.0	2.0	15	16.5	14.0		50.5
PV =	0.59	0.40	2.97	3.27	2.77		1.78

319 Kipswirl – 1.7

							Total
NVT=	3.0	2.0	25.0	14.0			44
PV =	0.68	0.45	5.68	3.18			1.66

319c Kipswirl Twirl - 2.1

							Total
NVT=	3.0	2.0	25.0	26.0	14.0		70
PV =	0.43	0.29	3.57	3.71	2.00		2.14

319d Kipswirl Spinning 180 – 1.7

							Total
NVT=	3.0	2.0	25.0	18.0	0.0		48
PV =	0.63	0.42	5.21	3.75	0.0		1.73

319e Kipswirl Spinning 360 – 1.8

							Total
NVT=	3.0	2.0	25.0	19.0	0.0		49
PV =	0.61	0.41	5.10	3.88	0.0		1.75

319f Kipswirl Continuous Spin – 2.0

						Total
NVT=	3.0	2.0	25.0	31.0		61
PV =	0.49	0.33	4.10	5.08		1.97

320 Kipswirl Split Closing 180 – 2.3

								Total
NVT=	3.0	2.0	25.0	17.0	18.0	14.0		79
PV =	0.38	0.25	3.16	2.15	2.28	1.77		2.30

321 Kipswirl Split Closing 360 – 2.5

								Total
NVT=	3.0	2.0	25.0	17.0	29.0	14.0		90
PV =	0.33	0.22	2.78	1.89	3.22	1.56		2.51

322 Elevator – 2.5

									Total
NVT=	3.0	2.0	23.0	14.0	10.0	16.0	19.0	3.0	90
PV =	0.33	0.22	2.56	1.56	1.11	1.78	2.11	0.33	2.51

323 Somersault Front Pike – 1.4

							Total
NVT=	6.0	8.0	8.0	6.0			28
PV =	2.14	2.86	2.86	2.14			1.37

324 Somersub – 1.9

								Total
NVT=	6.0	8.0	8.0	13.5	11.0	10.5		57
PV =	1.05	1.40	1.40	2.37	1.93	1.84		1.9

325 Subalina – 2.2

								Total
NVT=	6.0	8.0	8.0	14.5	20.5	14.0		71
PV =	0.85	1.13	1.13	2.04	2.89	1.97		2.16

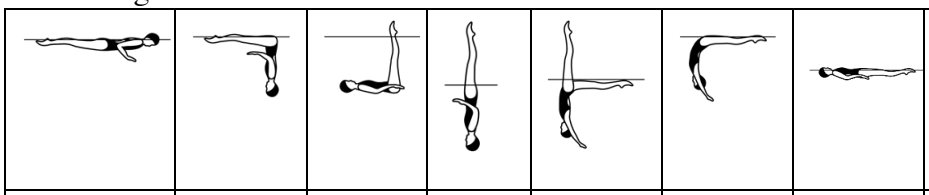
326 Subilarc – 2.8

									Total
NVT=	6.0	8.0	8.0	14.5	20.5	17.0	23.0	8.0	105
PV =	0.57	0.76	0.76	1.38	1.95	1.62	2.19	0.76	2.78

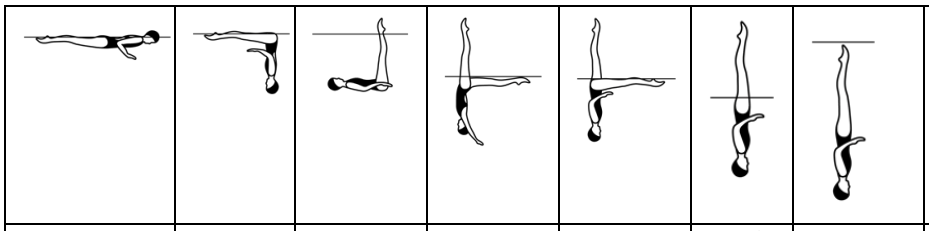
327 Ballerina – 1.8

								Total
NVT=	6.0	8.0	3.0	10.0	15.0	10.5		52.5
PV =	1.14	1.52	0.57	1.90	2.86	2.00		1.82

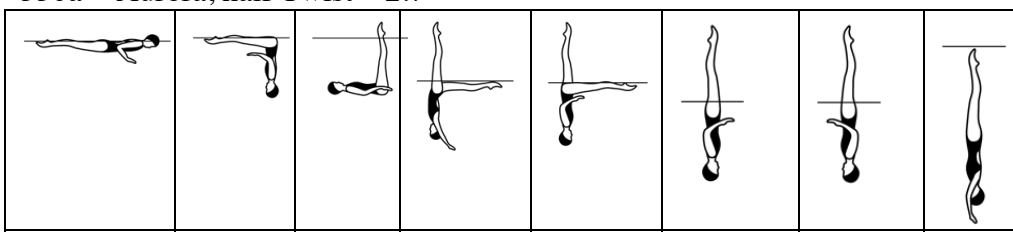
328 Lagoon – 2.4

								Total
NVT=	6.0	8.0	19.0	23.5	18.5	8.0		83
PV =	0.72	0.96	2.29	2.83	2.23	0.96		2.38

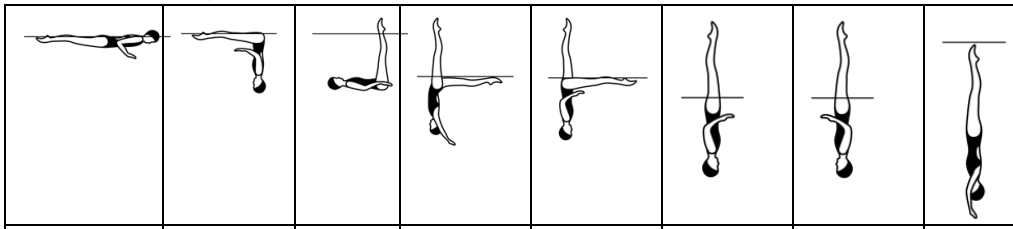
330 Aurora – 2.3

								Total
NVT=	6.0	8.0	16.0	14.0	20.5	14.0		78.5
PV =	0.76	1.02	2.04	1.78	2.61	1.78		2.3

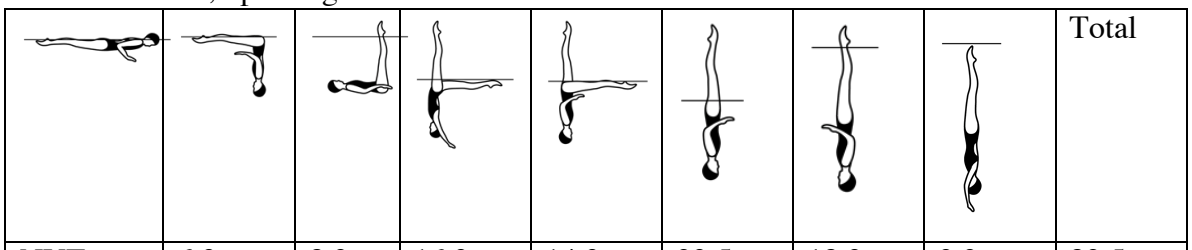
330a Aurora, half Twist – 2.7

								Total
NVT=	6.0	8.0	16.0	14.0	20.5	21.0	14.0	99.5
PV =	0.6	0.8	1.61	1.41	2.06	2.11	1.41	2.68

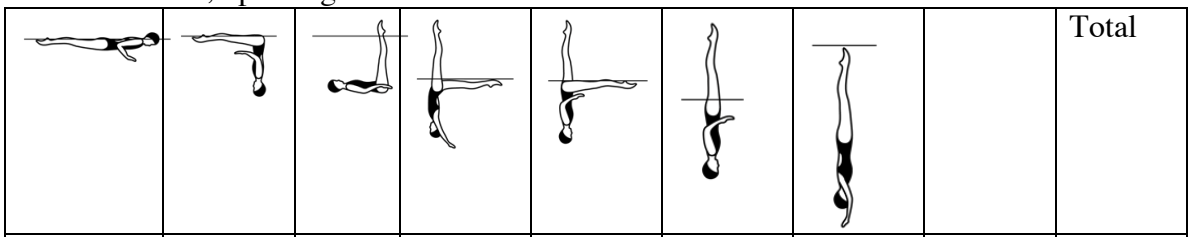
330c Aurora, Twirl – 2.8

								Total
NVT=	6.0	8.0	16.0	14.0	20.5	26.0	14.0	104.5
PV =	0.57	0.77	1.53	1.34	1.96	2.49	1.34	2.77

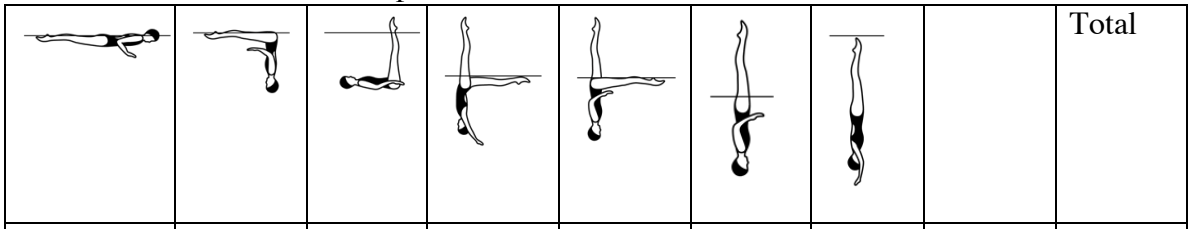
330d Aurora, Spinning 180 – 2.4

								Total
NVT=	6.0	8.0	16.0	14.0	20.5	18.0	0.0	82.5
PV =	0.73	0.97	1.94	1.70	2.48	2.18	0.0	2.37

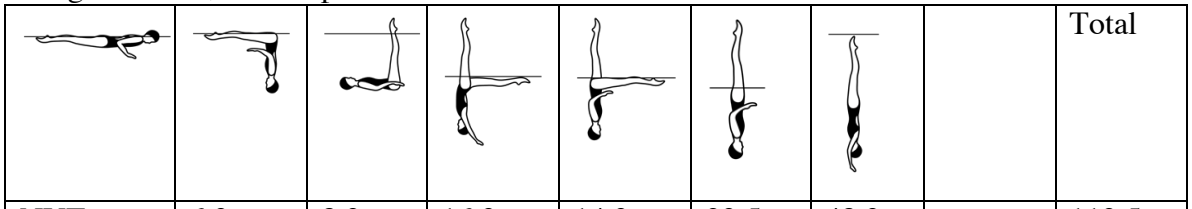
330e Aurora, Spinning 360 – 2.4

								Total
NVT=	6.0	8.0	16.0	14.0	20.5	19.0		83.5
PV =	0.72	0.96	1.92	1.68	2.46	2.28		2.39

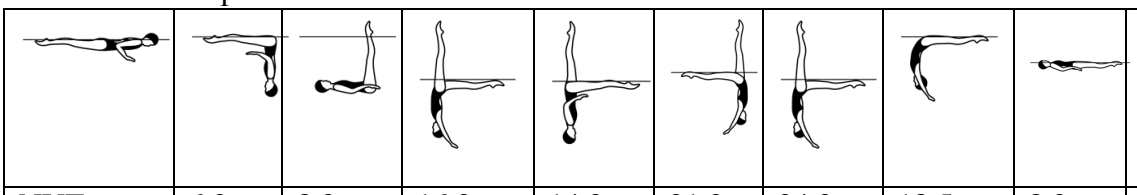
330f Aurora, Continuous Spin – 2.6

								Total
NVT=	6.0	8.0	16.0	14.0	20.5	31.0		95.5
PV =	0.63	0.84	1.68	1.47	2.15	3.25		2.61

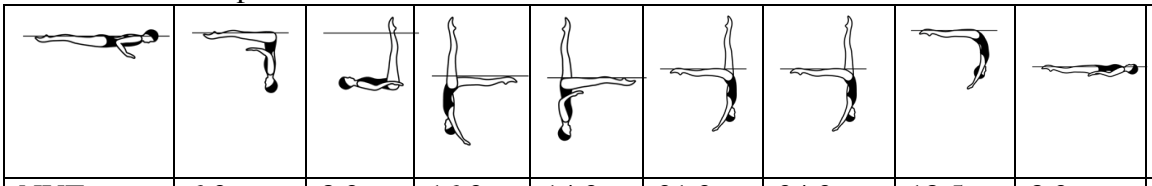
330g Aurora, Twist Spin – 2.9

								Total
NVT=	6.0	8.0	16.0	14.0	20.5	48.0		112.5
PV =	0.53	0.71	1.42	1.24	1.82	4.27		2.92

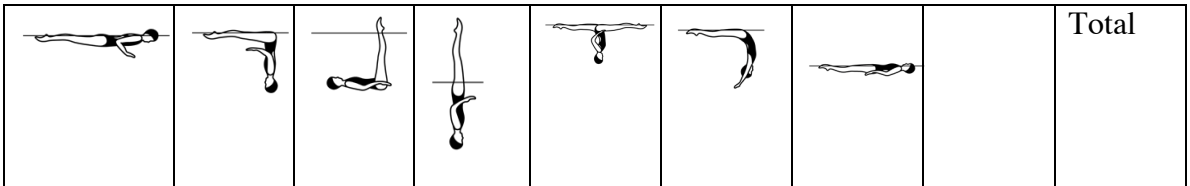
331 Aurora Open 180 – 3.0

									Total
NVT=	6.0	8.0	16.0	14.0	21.0	24.0	18.5	8.0	115.5
PV =	0.52	0.69	1.39	1.21	1.82	2.08	1.60	0.69	2.98

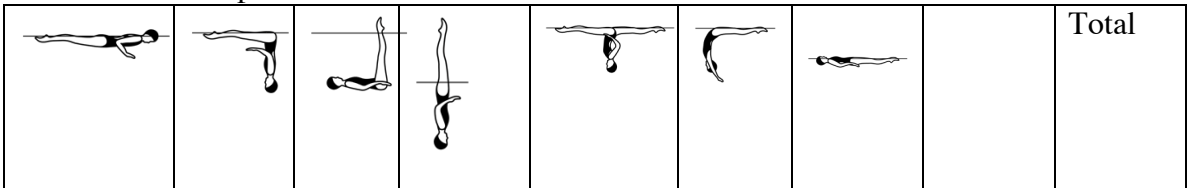
332 Aurora Open 360 – 3.2

									Total
NVT=	6.0	8.0	16.0	14.0	21.0	34.0	18.5	8.0	125.5
PV =	0.48	0.64	1.27	1.12	1.67	2.71	1.47	0.64	3.16

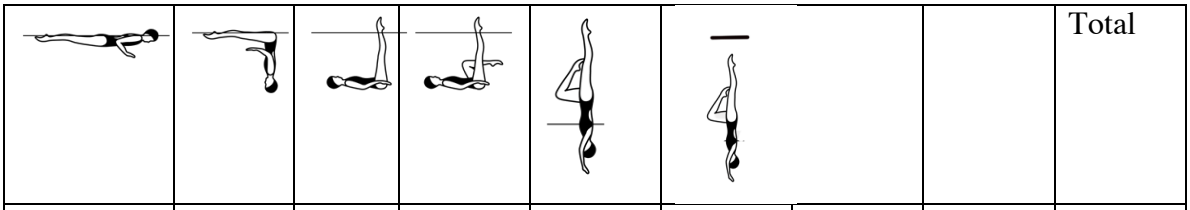
335 Gaviata – 2.3

								Total
NVT=	6.0	8.0	19.0	17.0	23.0	8.0		81
PV =	0.74	0.99	2.35	2.10	2.84	0.99		2.34

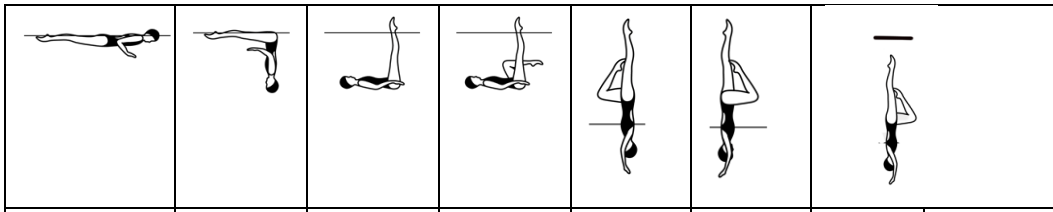
336 Gaviata Open 180 – 2.4

								Total
NVT=	6.0	8.0	19.0	20.0	23.0	8.0		84
PV =	0.71	0.95	2.26	2.38	2.74	0.95		2.4

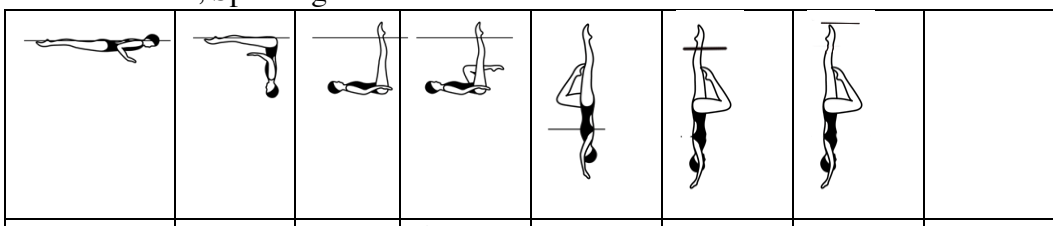
342 Heron – 1.9

								Total
NVT=	6.0	8.0	5.0	28.0	11.0			58
PV =	1.03	1.38	0.86	4.83	1.90			1.92

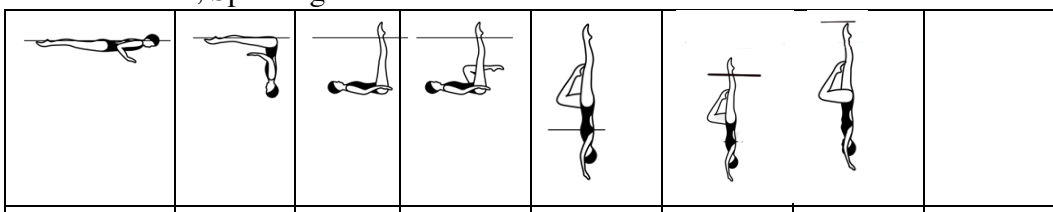
342c Heron, Twirl – 2.7

							Total
NVT=	6.0	8.0	5.0	28.0	21.0	11.0		79
PV =	0.76	1.01	0.63	3.54	2.66	1.39		2.3

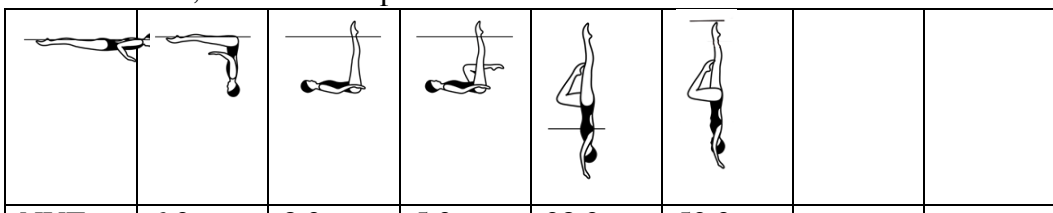
342d Heron, Spinning 180 – 2.1

							Total
NVT=	6.0	8.0	5.0	28.0	23.0	0.0		70
PV =	0.86	1.14	0.71	4.00	3.29	0.0		2.14

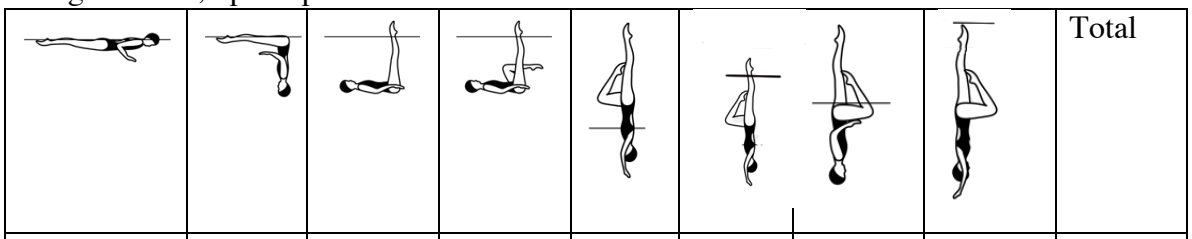
342e Heron, Spinning 360 – 2.2

							Total
NVT=	6.0	8.0	5.0	28.0	29.0	0.0		76
PV =	0.79	1.05	0.66	3.68	3.82	0.0		2.249

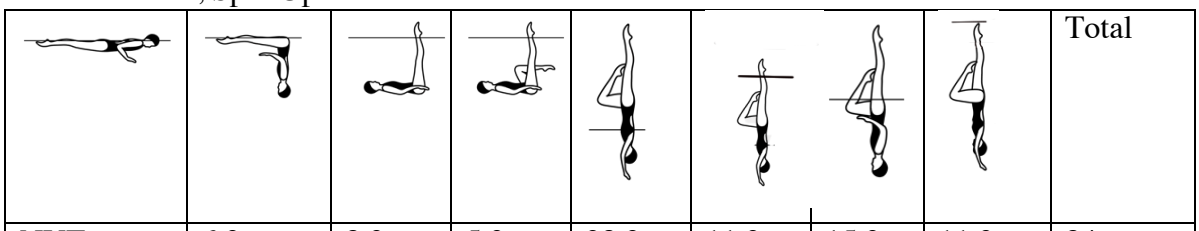
342f Heron, Continuous Spin – 2.7

							Total
NVT=	6.0	8.0	5.0	28.0	52.0			99
PV =	0.61	0.81	0.51	2.83	5.25			2.67

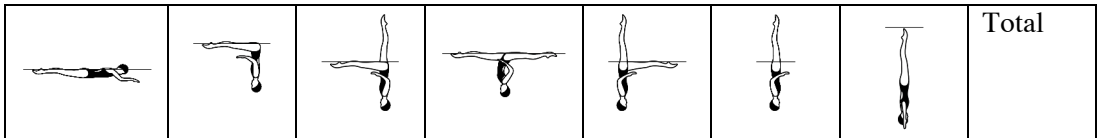
342g Heron, Spin Up 180 – 2.4

							Total
NVT=	6.0	8.0	5.0	28.0	11.0	14.0	11.0	83
PV =	0.72	0.96	0.60	3.37	1.33	1.69	1.33	2.38

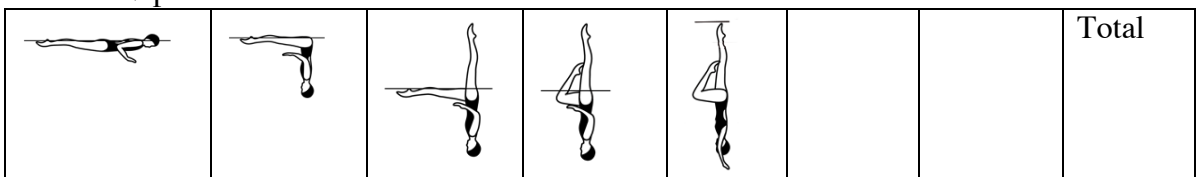
342h Heron, Spin Up 360 – 2.4

							Total
NVT=	6.0	8.0	5.0	28.0	11.0	15.0	11.0	84
PV =	0.71	0.95	0.60	3.33	1.31	1.79	1.31	2.4

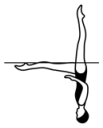
343 Butterfly - 2.5

							Total
NVT=	6.0	14.5	20.0	16.5	20.5	14.0	91.5
PV =	0.66	1.58	2.19	1.80	2.24	1.53	2.54

344 Neptunus – 1.7

							Total
NVT=	6.0	14.5	13.5	11.0			45
PV =	1.33	3.22	3.00	2.44			1.68

345 Catalina Reverse – 2.1

						Total
NVT=	6.0	14.5	24.0	11.0	10.5	66
PV =	0.91	2.20	3.64	1.67	1.59	2.07

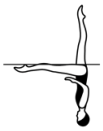
346 Side Fishtail Split – 2.0

								Total
NVT=	6.0	23.0	20.0	14.0				63
PV =	0.95	3.65	3.17	2.22				2.01

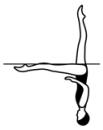
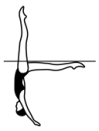
347 Minerva – 2.0

								Total
NVT=	6.0	23.0	22.0	10.0				61
PV =	0.98	3.77	3.61	1.64				1.97

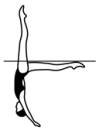
348 Tower – 1.9

								Total
NVT=	6.0	14.5	20.5	14.0				55
PV =	1.09	2.64	3.73	2.55				1.86

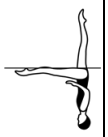
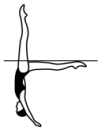
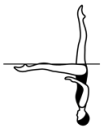
349 Beluga - 2.3

							Total
NVT=	6.0	14.5	21.0	18.5	8.0		68
PV =	0.88	2.13	3.09	2.72	1.18		2.1

350 Dalecarlia – 2.6

							
NVT=	6.0	14.5	31.0	22.0	11.0	10.5	95
PV =	0.63	1.53	3.26	2.32	1.16	1.11	2.6

351 Jupiter – 2.8

								Total
NVT=	6.0	14.5	31.0	18.0	20.5	14.0		104
PV =	0.58	1.39	2.98	1.73	1.97	1.35		2.77

355 Porpoise – 1.8

							Total
NVT=	6.0	33.0	14.0				53
PV =	1.13	6.23	2.64				1.83

355a Porpoise, Half Twist – 2.2

							Total
NVT=	6.0	33.0	21.0	14.0			74
PV =	0.81	4.46	2.84	1.89			2.21

355b Porpoise, Full Twist – 2.4

								Total
NVT=	6.0	33.0	32.0	14.0				85
PV =	0.71	3.88	3.76	1.65				2.42

355c Porpoise, Twirl – 2.3

								Total
NVT=	6.0	33.0	26.0	14.0				79
PV =	0.76	4.18	3.29	1.77				2.30

355d Porpoise, Spinning 180 – 1.9

								Total
NVT=	6.0	33.0	18.0	0.0				57
PV =	1.05	5.79	3.16	0.0				1.9

355e Porpoise, Spinning 360 – 1.9

								Total
NVT=	6.0	33.0	19.0	0.0				58
PV =	1.03	5.69	3.28	0.0				1.92

355f Porpoise, Continuous Spin – 2.1

								Total
NVT=	6.0	33.0	31.0					70
PV =	0.86	4.71	4.43					2.14

355g Porpoise, Twist Spin – 2.5

								Total
NVT=	6.0	33.0	48.0					87
PV =	0.69	3.79	5.52					2.45

355h Porpoise, Spin Up 180 – 2.4

								Total
NVT=	6.0	33.0	14.0	18.0	14.0			85
PV =	0.71	3.88	1.65	2.12	1.65			2.42

355i Porpoise, Spin Up 360 – 2.4

								Total
NVT=	6.0	33.0	14.0	19.0	14.0			86
PV =	0.70	3.84	1.63	2.21	1.63			2.43

355j Porpoise, Combined Spin – 2.5

							Total
NVT=	6.0	33.0	38.0	14.0			91
PV =	0.66	3.63	4.18	1.54			2.53

360 Walkover Front – 1.9

								Total
NVT=	6.0	20.0	23.0	8.0				57
PV =	1.05	3.51	4.04	1.40				1.9

361 Prawn -1.5

								Total
NVT=	6.0	20.0	5.0	5.0				36
PV =	1.67	5.56	1.39	1.39				1.51

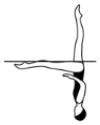
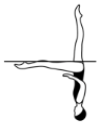
362 Surface Prawn -1.3

								Total
NVT=	6.0	9.0	5.0	5.0				25
PV =	2.40	3.60	2.00	2.00				1.31

363 Water Drop -1.6

							Total
NVT=	6.0	15.0	15.0	0.0			36
PV =	1.67	4.17	4.17	0.0			1.51

364 Whirlwind -2.7

							Total
NVT=	6.0	14.5	50.0	29.5	0.0		100
PV =	0.60	1.45	5.00	2.95	0.0		2.69

CATEGORY IV

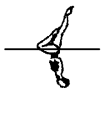
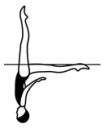
401 Swordfish – 2.0

								Total
NVT=	4.0	35.0	14.5	8.0				61.5
PV =	0.65	5.69	2.36	1.3				1.98 (DD)

402 Swordasub – 2.3

								Total
NVT=	4.0	29.0	24.5	11.0	10.5			79
PV =	0.51	3.67	3.10	1.39	1.33			2.3

403 Swordtail – 2.3

								Total
NV=	4.0	29.0	20.0	18.5	8.0			79.5
PV =	0.50	3.65	2.52	2.33	1.01			2.31

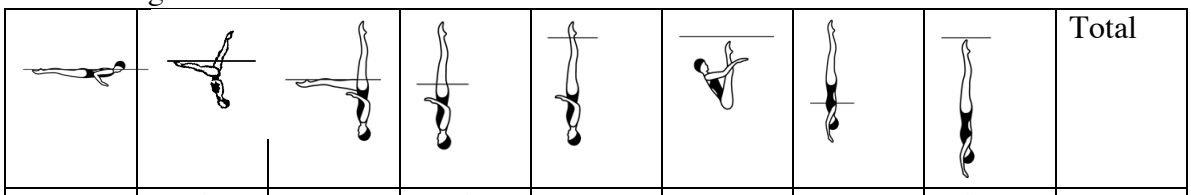
405 Swordalina – 2.4

								Total
NVT=	4.0	29.0	21.0	10.5	11.0	10.5		86
PV =	0.47	3.37	2.44	1.22	1.28	1.22		2.43

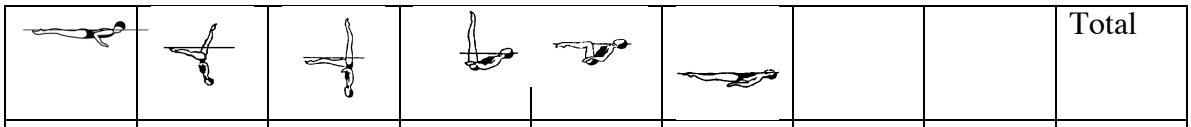
406 Swordfish, Straight Leg – 2.0

								Total
NVT=	33.0	23.0	8.0					64
PV =	5.16	3.59	1.25					2.03

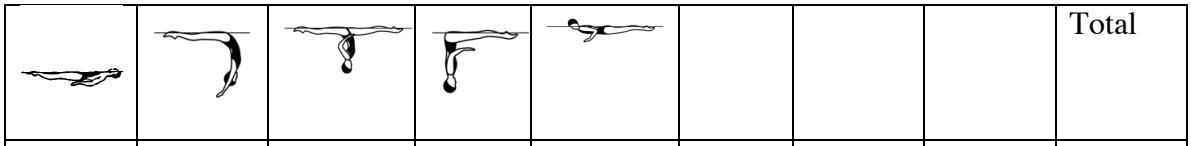
410 Hightower – 3.4

								Total
NVT=	30.5	14.0	20.5	14.0	12.0	31.0	15.0	137
PV =	2.23	1.02	1.50	1.02	0.88	2.26	1.09	3.37

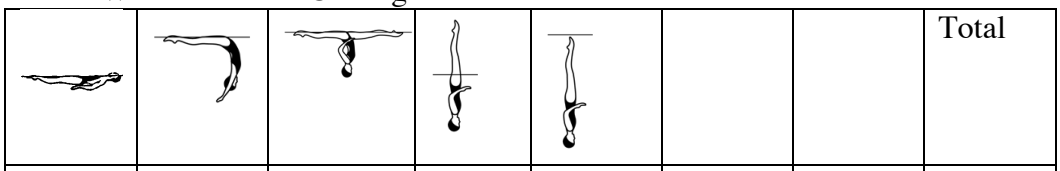
413 Alba – 2.7

								Total
NVT=	30.5	14.0	31.5	19.0	3.0			98
PV =	3.11	1.43	3.21	1.94	0.31			2.65

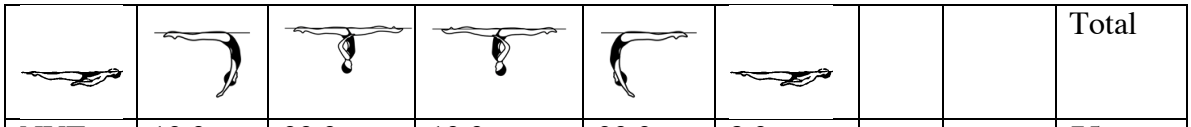
420 Walkover Back – 1.9

								Total
NVT=	12.0	22.0	19.0	6.0				59
PV =	2.03	3.73	3.22	1.02				1.94

421 Walkover Back Closing 360 – 2.2

							Total
NVT=	12.0	22.0	27.0	14.0			75
PV =	1.60	2.93	3.60	1.87			2.23

423 Ariana – 2.2

								Total
NVT=	12.0	22.0	10.0	23.0	8.0			75
PV =	1.60	2.93	1.33	3.07	1.07			2.23

435 Nova – 2.2

								Total
NVT=	17.5	21.0	22.0	14.0				74.5
PV =	2.35	2.82	2.95	1.88				2.22

435c Nova, Twirl – 2.7

								Total
NVT=	17.5	21.0	22.0	26.0	14.0			100.5
PV =	1.74	2.09	2.19	2.59	1.39			2.7

435d Nova, Spinning 180 – 2.3

								Total
NVT=	17.5	21.0	22.0	18.0				78.5
PV =	2.23	2.68	2.80	2.29				2.3

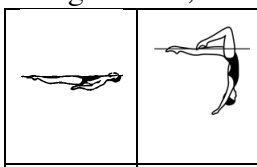
435e Nova, Spinning 360 – 2.3

								Total
NVT=	17.5	21.0	22.0	19.0				79.5
PV =	2.20	2.64	2.77	2.39				2.31

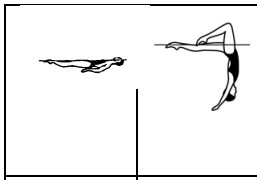
435f Nova, Continuous Spin – 2.5

								Total
NVT=	17.5	21.0	22.0	31.0				91.5
PV =	1.91	2.30	2.40	3.39				2.54

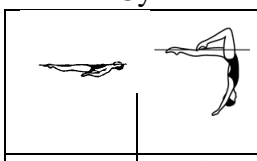
435g Nova, Twist Spin – 2.8

								Total
NVT=	17.5	21.0	22.0	48.0				108.5
PV =	1.61	1.94	2.03	4.42				2.848

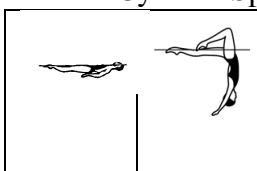
436 Cyclone – 2.4

						Total
NVT=	17.5	29.0	21.0	14.0		81.5
PV =	2.15	3.56	2.58	1.72		2.35

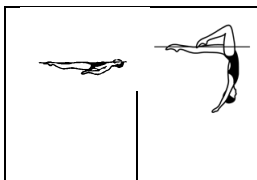
436c Cyclone Twirl – 2.8

							Total
NVT=	17.5	29.0	21.0	26.0	14.0		107.5
PV =	1.63	2.70	1.95	2.42	1.30		2.83

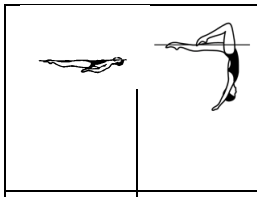
436d Cyclone Spinning 180º – 2.4

							Total
NVT=	17.5	29.0	21.0	18.0	0.0		85.5
PV =	2.05	3.39	2.46	2.11	0.0		2.42

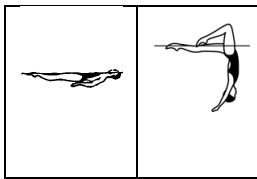
436e Cyclone Spinning 360º – 2.4

							Total
NV=	17.5	29.0	21.0	19.0	0.0		86.5
PV =	2.02	3.35	2.43	2.20	0.0		2.44

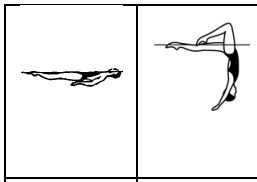
436f Cyclone Continuous Spin – 2.7

						Total
NVT=	17.5	29.0	21.0	31.0		98.5
PV =	1.78	2.94	2.13	3.15		2.66

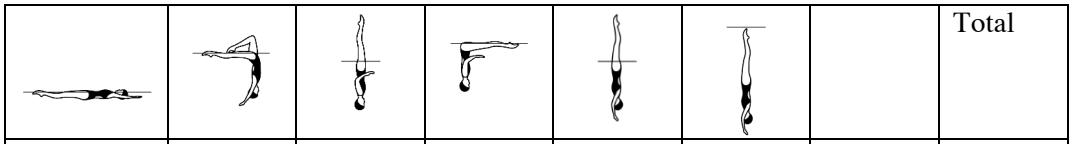
437 Oceanea – 2.1

							Total
NVT=	17.5	21.0	31.0				69.5
PV =	2.52	3.02	4.46				2.13

439 Oceanita – 1.8

							Total
NVT=	17.5	21.0	14.0				52.5
PV =	3.33	4.00	2.67				1.82

440 Ipanema – 3.0

							Total
NVT=	17.5	21.0	33.0	33.0	14.0		118.5
PV =	1.48	1.77	2.78	2.78	1.18		3.03

6. New Figures 2017

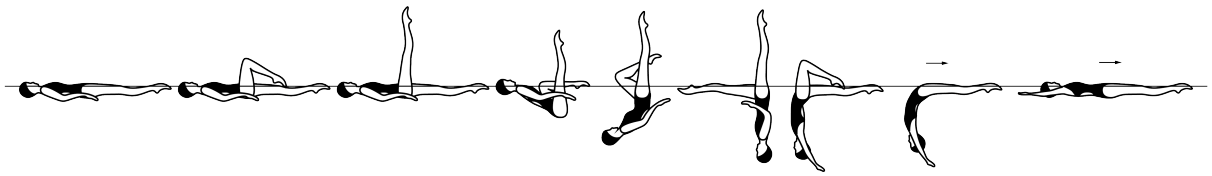
106 Straight Ballet Leg 1.6

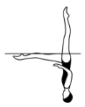
From a **Back Layout Position**, one leg is raised straight to a **Ballet Leg Position.** From the **Ballet Leg Position** the vertical leg is bent, without movement of the thigh, to a **Bent Knee Back Layout Position**. The toe moves along the inside of the extended leg until a **Back Layout Position** is assumed.

							Total
NVT=	18.5	11.0	10.5				40
PV =	4.63	2.75	2.63				

142 Manta Ray (description-minor changed) 3.0

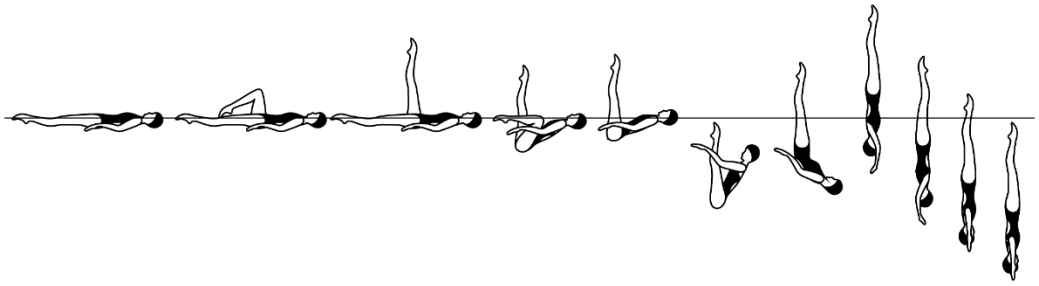
A Flamingo is executed to a **Surface Flamingo Position**. With the ballet leg maintaining its vertical position, the hips are lifted as the trunk unrolls while the bent leg moves with the knee at the surface to assume a **Fishtail Position**. The horizontal leg is lifted rapidly in a 180° arc over the surface of the water, as it passes vertical, the vertical leg is moved to assume a **Bent Knee Surface Arch Position**. The bent knee is straightened and with continuous motion, an *Arch to Back Layout Finish Action* is executed.



								Total
NVT=	10.5	11.0	13.0	22.5	36.0	14.5	8.0	115.5
PV =	0.90	0.95	1.13	1.95	3.12	1.26	0.69	

143 Rio 3.1

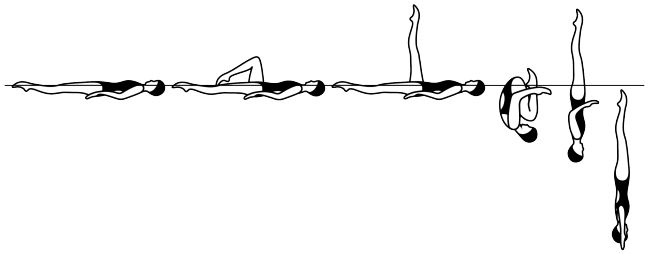
A Flamingo is executed to a **Surface Flamingo Position**. The horizontal leg is extended to a **Surface Ballet Leg Double Positon**. The body submerges vertically to a **Back Pike Position** with the toes just under the surface. The figure is completed as a Barracuda Spin 360°.



								Total
NVT=	10.5	11.0	13.0	13.0	15.0	31.0	30.0	123.5
PV =	0.85	0.89	1.05	1.05	1.21	2.51	2.43	

154 London (new description) 1.9

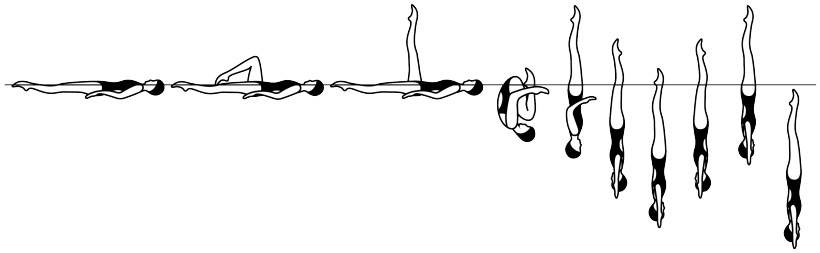
A *Ballet Leg is assumed* followed by a partial Somersault Back Tuck, as both legs are drawn into a **Tuck Position**, until the shins are perpendicular to the surface. The trunk unrolls rapidly as the legs are rapidly straightened to assume a **Vertical Position** midway between the former vertical line through the hips and the former vertical line through the head and the shins. A rapid *Vertical Descent* is executed.



							Total
NVT=	10.5	11.0	7.0	18.0	13.0		59.5
PV =	1.76	1.85	1.18	3.03	2.18		

154j-1 London Combined Spin 360° 2.7

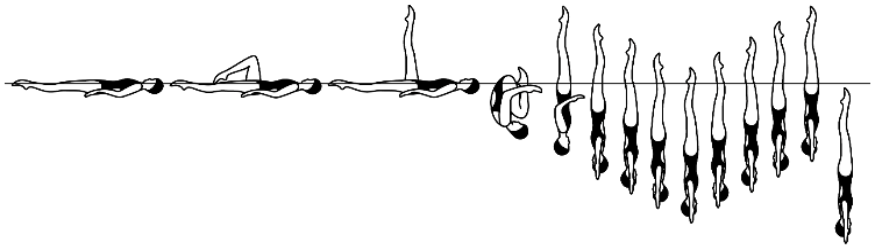
A London is executed to a **Vertical Position**. A rapid *Combined Spin of 360°* (descending spin 360° + ascending spin 360°) is executed. A rapid *Vertical Descent* is executed.



								Total
NVT=	10.5	11.0	7.0	18.0	42.0	13.0		101.5
PV =	1.03	1.08	0.69	1.77	4.14	1.28		

154j-2 London Combined Spin 720° 2.9

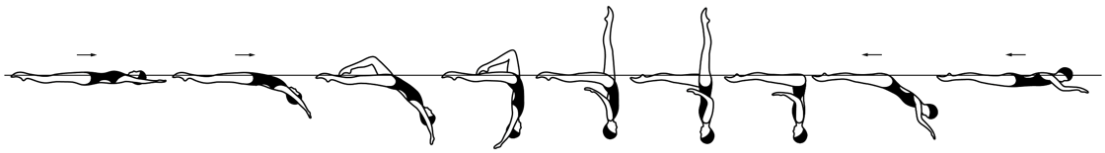
A London is executed to a **Vertical Position**. A rapid *Combined Spin of 720°* (descending spin 720° + ascending spin 720°) is executed. A rapid *Vertical Descent* is executed.



								Total
NVT=	10.5	11.0	7.0	18.0	50.0	13.0		109.5
PV =	0.96	1.00	0.64	1.64	4.57	1.19		

226 Swan 2.1

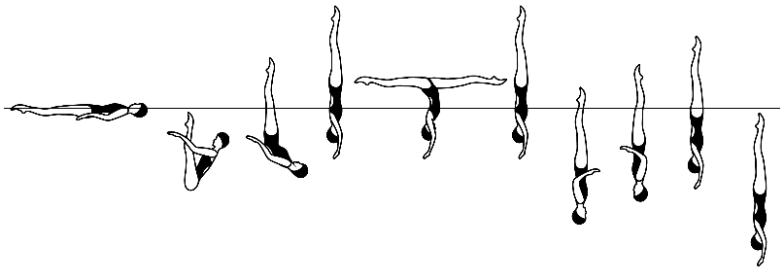
A Nova is executed to the **Bent Knee Surface Arch Position**. The bent leg straightens to assume a **Knight Position**. The body rotates 180° to assume a **Fishtail Position**. The vertical leg is lowered to the surface to meet the opposite leg in a **Front Pike Position** and with continuous movement the body straightens to a **Front Layout Position**. The head surfaces at the point occupied by the hips at the beginning of this action.



							Total
NVT=	17.5	14.0	14.0	14.5	6.0		66
PV =	2.65	2.12	2.12	2.20	0.91		

308i Barracuda Airborne Split Spin Up 360° 3.3

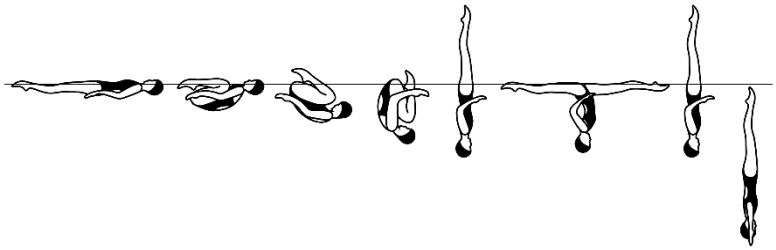
A Barracuda Airborne Split is executed to a re-joined **Vertical Position.** A *Vertical Descent* is executed at the same tempo as the *Thrust* to ankle level. The designated *Ascending Spin* is executed. A *Vertical Descent* is executed at the same tempo as the *Thrust*.



								Total
NVT=	10.0	31.0	43.0	-	15.0	19.0	13.0	
PV =	0.76	2.37	3.28	-	1.15	1.45	0.99	

315 Seagull 2.1

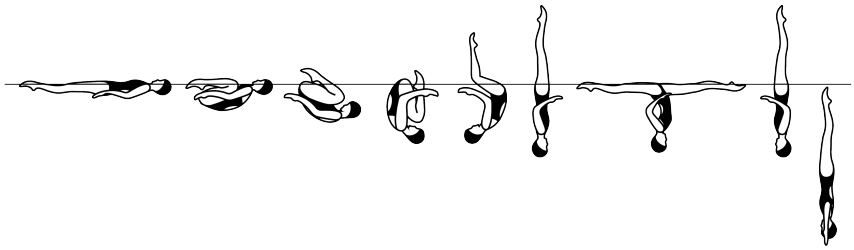
From a **Back Layout Position**, a partial Somersault Back Tuck is executed until the shins are perpendicular to the surface of the water. The trunk unrolls rapidly as the legs are straightened to assume a **Vertical Position** midway between the former vertical line through the hips and the former vertical line through the head and the shins. The legs are lowered rapidly symmetrically to **Split Position**. The legs are joined rapidly to resume **Vertical Position**. A *Vertical Descent* is executed at the same tempo as the initial actions of the figure.



							Total
NVT=	3.0	2.0	18.0	17.0	16.0	14.0	70
PV =	0.43	0.29	2.57	2.43	2.29	2.00	

320 Kipswirl Split Closing 180° 2.3

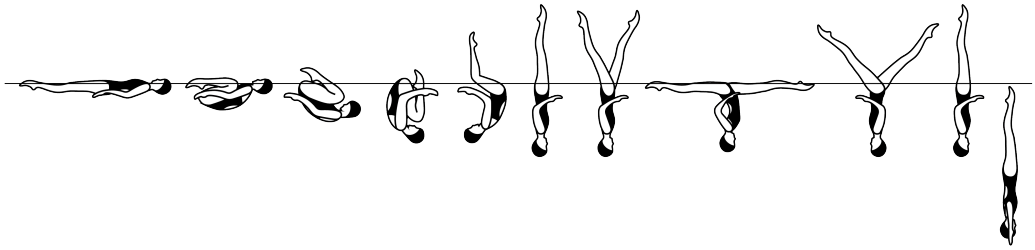
A Kipswirl is executed to the **Vertical Position**. The legs are lowered symmetrically to a **Split Position**. A rapid rotation of 180° is executed, as the legs symmetrically close to a **Vertical Position**. A *Vertical Descent* is executed.



								Total
NVT=	3.0	2.0	25.0	17.0	18.0	14.0		79
PV =	0.38	0.25	3.16	2.15	2.28	1.77		

321 Kipswirl Closing 360° 2.5

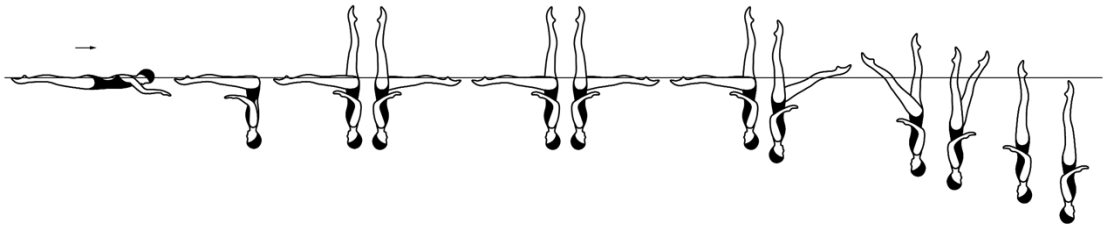
A Kipswirl is executed to the **Vertical Position**. The legs are lowered symmetrically to a **Split Position**. A rapid rotation of 360° is executed, as the legs symmetrically close to a **Vertical Position**. A *Vertical Descent* is executed.

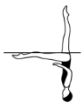


								Total
NVT=	3.0	2.0	25.0	17.0	29.0	14.0		90
PV =	0.33	0.22	2.78	1.89	3.22	1.56		

364 Whirlwind 2.7

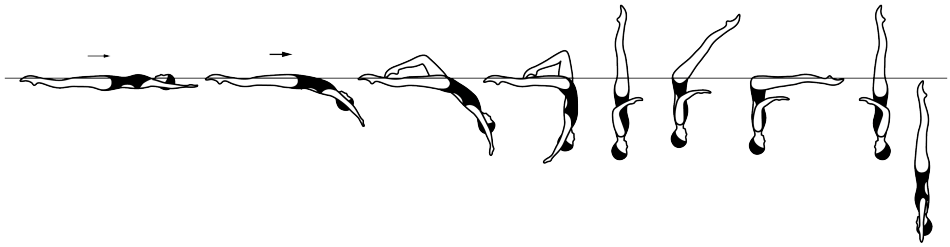
From a **Front Layout Position** a *Front Pike Position* is assumed. One leg is lifted to a **Fishtail Position**. Maintaining a **Fishtail Position**, with the horizontal leg leading toward the vertical leg, two rapid rotations (720°) are executed. Continuing in the same direction, the horizontal leg is lifted to a **Vertical Position** as a *Continuous Spin 720°* is executed.



							Total
NVT=	6.0	14.5	50.0	29.5	-		100
PV =	0.60	1.45	5.00	2.95	-		

440 Ipanema 3.0

A Nova is executed to the **Bent Knee Surface Arch Position**. The horizontal leg is lifted as the bent knee is straightened to assume a **Vertical Position**. The legs are lowered to a **Front Pike Position**. A rapid 180° rotation is executed as the legs lift to a **Vertical Position**. *A Vertical Descent* is executed at the tempo of the rest of the figure.



							Total
NVT=	17.5	21.0	33.0	33.0	14.0		118.5
PV =	1.48	1.77	2.78	2.78	1.18		

7. FINA Figure Groups 2017-2021

7.1 List of FINA Figure Groups 2017-2021

Senior and Junior				DD
COMPULSORY	1	308i	Barracuda Airborne Split Spin Up 360°	3.3
	2	355g	Porpoise Twist Spin	2.5
OPTIONAL GROUPS				
Group 1	3	154j-2	London Combined Spin 720°	2.9
	4	330c	Aurora Twirl	2.8
Group 2	3	364	Whirlwind	2.7
	4	343	Butterfly	2.5
Group 3	3	320	Kipswirl Split Closing 180°	2.3
	4	440	Ipanema	3.0

Age Group 13-14-15				DD
COMPULSORY	1	423	Ariana	2.2
	2	143	Rio	3.1
OPTIONAL GROUPS				
Group 1	3	351	Jupiter	2.8
	4	437	Oceanea	2.1
Group 2	3	240a	Albatross Half Twist	2.2
	4	403	Swordtail	2.3
Group 3	3	355f	Porpoise Continuous Spin 720°	2.1
	4	315	Seagull	2.1

Age Group 12 and under				DD
COMPULSORY	1	106	Straight Ballet Leg	1.6
	2	301	Barracuda	1.9
OPTIONAL GROUPS				
Group 1	3	420	Walkover Back	1.9
	4	327	Ballerina	1.8
Group 2	3	311	Kip	1.6
	4	401	Swordfish	2.0
Group 3	3	226	Swan	2.1
	4	363	Water Drop	1.5

7.2 NVT and PV Charts of Figure Groups 2017 – 2021

Senior and Junior

1 308i Barracuda Airborne Split, Spin Up 360° 3.3

								Total
NVT=	10.0	31.0	43.0	-	15.0	19.0	13.0	131
PV =	0.76	2.37	3.28	-	1.15	1.45	0.99	

2 355g Porpoise Twist Spin 2.5

								Total
NVT=	6.0	33.0	48.0					87
PV =	0.69	3.79	5.52					

3 154j-2 London Combined Spin 720° 2.9

							Total
NVT=	10.5	11.0	7.0	18.0	50.0	13.0	109.5
PV =	0.96	1.00	0.64	1.64	4.57	1.19	

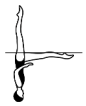
4 330c Aurora Twirl 2.8

								Total
NVT=	6.0	8.0	16.0	14.0	20.5	26.0	14.0	104.5
PV =	0.57	0.77	1.53	1.34	1.96	2.49	1.34	

3 364 Whirlwind 2.7

							Total
NVT=	6.0	14.5	50.0	29.5	-		100
PV =	0.60	1.45	5.00	2.95	-		

4 343 Butterfly 2.5

							Total
NVT=	6.0	14.5	20.0	16.5	20.5	14.0	91.5
PV =	0.66	1.58	2.19	1.80	2.24	1.53	

3 320 Kipswirl Split Closing 180° 2.3

								Total
NVT=	3.0	2.0	25.0	17.0	18.0	14.0		79
PV =	0.38	0.25	3.16	2.15	2.28	1.77		

4 440 Ipanema 3.0

							Total
NVT=	17.5	21.0	33.0	33.0	14.0		118.5
PV =	1.48	1.77	2.78	2.78	1.18		

Age Group 13-14-15

1 423 Ariana **2.2**

							Total
NVT=	12.0	22.0	10.0	23.0	8.0		75
PV =	1.60	2.93	1.33	3.07	1.07		

2 143 Rio **3.1**

								Total
NVT=	10.5	11.0	13.0	13.0	15.0	31.0	30.0	123.5
PV =	0.85	0.89	1.05	1.05	1.21	2.51	2.43	

3 351 Jupiter **2.8**

							Total
NVT=	6.0	14.5	31.0	18.0	20.5	14.0	104
PV=	0.58	1.39	2.98	1.73	1.97	1.35	

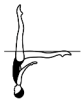
4 437 Oceanea **2.1**

							Total
NVT=	17.5	21.0	31.0				69.5
PV =	2.52	3.02	4.46				

3 240a Albatross ½ Twist 2.2

								Total
NVT=	11.0	15.0	15.0	16.5	14.0			71.5
PV =	1.54	2.10	2.10	2.31	1.96			

4 403 Swordtail 2.3

							Total
NV=	4.0	29.0	20.0	18.5	8.0		79.5
PV =	0.50	3.65	2.52	2.33	1.01		

3 355f Porpoise Continuous Spin 720° 2.1

							Total
NVT=	6.0	33.0	31.0				70.0
PV =	0.86	4.71	4.43				

4 315 Seagull 2.1

							Total
NVT=	3.0	2.0	18.0	17.0	16.0	14.0	70
PV =	0.43	0.29	2.57	2.43	2.29	2.00	

Age Group 12 and Under

1 106 Straight Ballet Leg 1.6

								Total
NVT=	18.5	11.0	10.5					40
PV =	4.63	2.75	2.63					

2 301 Barracuda 1.9

								Total
NVT=	10.0	31.0	15.0					56
PV =	1.89	5.54	2.68					

3 420 Walkover Back 1.9

							Total
NVT=	12.0	22.0	19.0	6.0			59
PV =	2.03	3.73	3.22	1.02			

4 327 Ballerina 1.8

								Total
NVT=	6.0	8.0	3.0	10.0	15.0	10.5		52.5
PV =	1.14	1.52	0.57	1.90	2.86	2.0		

3 311 Kip 1.6

								Total
NVT=	3.0	2.0	23.0	14.0				42
PV =	0.71	0.48	5.48	3.33				

4 401 Swordfish 2.0

							Total
NVT=	4.0	35.0	14.5	8.0			61.5
PV =	0.65	5.69	2.36	1.30			

3 226 Swan 2.1

							Total
NVT=	17.5	14.0	14.0	14.5	6.0		66
PV =	2.65	2.12	2.12	2.20	0.91		

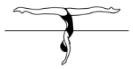
4 363 Water Drop 1.5

							Total
NVT=	6.0	15.0	15.0	-			36
PV =	1.67	4.17	4.17	-			

8. FINA Required Elements for Technical Routines with an assigned degree of difficulty 2017-2021

SENIOR SOLO

1. Starting in a **Submerged Back Pike Position** with the legs perpendicular to the surface, a *Thrust* is executed to a **Vertical Position** and with no loss of height one leg is lowered rapidly to a **Bent Knee Position** and as the vertical leg is lowered forward, the bent knee is extended to assume an **Airborne Split Position** and maintaining maximum height the legs are lifted symmetrically to a **Vertical Position**, followed by a *Vertical Descent*. All movements are executed rapidly. [DD 2.7]

							Total
NVT=	31.0	52.0	-	-	15.0		98
PV =	3.16	5.31	-	-	1.53		

2. A *Dolphin* is initiated, and the back continues to arch to assume a **Surface Arch Position.** The legs are lifted to a **Vertical Position**. Two *Full Twists* (720°) *are* executed, and continuing in the same direction a *Continuous Spin 1080°* (3 rotations) executed. [DD 3.4]

								Total
NVT=	12.0	37.0	54.0	35.0				138
PV =	0.87	2.68	3.91	2.54				

3. 141 - Stingray
   A Flamingo is executed to a **Surface Flamingo Position**, travelling head first. With the ballet leg maintaining its vertical position, the hips are lifted as the trunk unrolls while the bent leg moves with the knee at the surface to assume a **Fishtail Position**. The horizontal leg is lifted in an arc over the surface. As it passes the vertical leg which moves symmetrically, a 180° rotation is started and is completed as a **Split Position** is assumed. A *Walkout Front* is executed. [DD 3.2]

									Total
NV=	10.5	11.0	13.0	22.5	20.5	20.0	23.0	8.0	128.5
PV=	0.82	0.86	1.01	1.75	1.60	1.56	1.79	0.62	

4. Starting in a **Vertical Position** a *Full Twist* is executed followed by a *Combined Spin of 1080°* (3 rotations + 3 rotations). [DD 2.7]

								Total
NVT=	32.0	54.0	-	14.0				100
PV =	3.20	5.40		1.40				

5. Starting in a submerged **Back Pike Position** with the legs perpendicular to the surface, a Barracuda Continuous Spin 720° *(*2 rotations) is executed. [DD 2.3]

								Total
NVT=	31.0	50.0						81
PV =	3.83	6.17						

SENIOR DUET

1. Starting in a **Vertical Position**, a *Full Twist* is executed as one leg is lowered to a **Bent Knee Vertical Position.** Continuing in the same direction another *Full Twist* is executed, as the bent knee is extended to a **Vertical Position**. A *Continuous Spin of 1080°* is executed. (3 rotations). [DD 2.3]

								Total
NVT=	20.5	22.0	35.0					77.5
PV =	2.65	2.84	4.52					

2. From a **Back Layout Position** a straight leg is lifted to a **Ballet Leg Position**. The shin of the horizontal leg is drawn along the surface to assume a **Surface Flamingo Position**. The bent knee is straightened to a **Surface Ballet Leg Double Position**. Maintaining the legs vertical, the body submerges to a **Submerged Back Pike Position** until the feet are just below the surface. Executing a 360° rotation the body rises to the surface simultaneously lowering one leg with foot at the surface to assume a **Surface Flamingo Position**. The horizontal leg is straightened horizontally to a **Ballet Leg Position**. The vertical leg is lowered straight to a **Back Layout Position**. Head first travel is allowed during the Ballet Leg sequence. [DD 2.9]

								Total
NVT=	18.5	13.0	13.0	15.0	18.5	13.0	18.5	109.5
PV =	1.69	1.19	1.19	1.37	1.69	1.19	1.69	

3. Starting and maintaining a **Fishtail Position**, with the horizontal leg leading toward the vertical leg, 2 rapid rotations (720°) are executed. Continuing in the same direction and same speed, a rapid *Full Twist* is executed as the horizontal leg is lifted to a **Vertical Position**. A *Continuous Spin 720°* is executed. [DD 2.8]

								Total
NVT=	50.0	26.5	31.0					107.5
PV =	4.65	2.47	2.88					

4. A Cyclone is executed to the **Vertical Position**. A *Half Twist* is executed. Continuing in the same direction an additional rotation of 180° is executed as the legs are symmetrically opened to assume a **Split Position**. A *Walkout Front* is executed. [DD 3.0]

							Total
NVT=	17.5	29.0	21.0	20.0	23.0	8.0	118.5
PV =	1.48	2.45	1.77	1.69	1.94	0.68	

5. Starting in a submerged **Back Pike Position** with the legs perpendicular to the surface, a *Thrust* is executed to a Vertical Position and with no loss of height one leg is rapidly lowered to a **Fishtail Position**. The horizontal leg is lifted to a **Vertical Position** as a *Spin 360°* is executed. [DD 2.5]

						Total
NVT=	31.0	34.0	25.5	-		90.5
PV =	3.43	3.76	2.82	-		

SENIOR & JUNIOR MIXED DUET

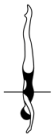
1. From **Front Pike Position** the legs are lifted to **Vertical Position** as a rotation of 360° is executed. [DD 1.5]

				Total
NVT=	35.0			35
PV =	10.0			

2. Ballet leg Sequence: A *Ballet Leg is assumed* followed by a rapid exchange to *assume the opposite Ballet Leg* as the vertical leg is lowered straight to horizontal. The horizontal leg is bent to assume a **Surface Flamingo Position**. The bent leg is straightened to a **Ballet Leg Double Position**. Maintaining the **Ballet Leg Double Position**, a rotation of 360° is executed. Travelling head first until the **Ballet Leg Double Position** is assumed. [DD 2.5]

							Total
NVT=	10.5	11.0	17.0	13.0	13.0	24.0	88.5
PV =	1.19	1.24	1.92	1.47	1.47	2.71	

3. From a **Submerged Back Pike Position** with the legs perpendicular to the surface, a Barracuda Twirl is executed. [DD 2.4]

				Total
NVT=	31.0	36.0	15.0	82
PV =	3.78	4.39	1.83	

4. From a **Knight Position**, maintaining the vertical alignment of the body, the horizontal leg is moved in a 180° arc at the surface of the water to assume a **Fishtail Position**. Maintaining the angle between the legs, the horizontal leg moves to vertical as the vertical leg simultaneously continuous its arc to the surface to assume a **Knight Position**. The vertical leg is lowered to assume a **Surface Arch Position**, with continuous motion a surface *arch to back layout finish action* is executed. [DD 2.2]

						Total
NVT=	18.0	31.0	18.5	8.0		75.5
PV =	2.38	4.11	2.45	1.06		

5. From a **Front Pike Position** the legs are lifted to a **Vertical Position** -A *Full Twist* is executed as one leg is lowered to a **Bent Knee Vertical Position**, followed by a *Continuous Spin of 720° (2 rotations)* as the bent knee is joined to a **Vertical Position.** [DD 2.3]

						Total
NVT=	33.0	20.5	24.0	-		77.5
PV =	4.26	2.65	3.10	-		

Senior Team

1. Starting in a **Submerged Back Pike Position** with the legs perpendicular to the surface, a *Thrust* is executed to a **Vertical Position** and with no loss of height one leg is lowered to a **Bent Knee Vertical Position.** A rapid *360° Spin* is executed as the bent knee is extended to a **Vertical Position**. [DD 2.5]

						Total
NVT	31.0	32.0	24.0	-		87
PV	3.56	3.68	2.76	-		

2. From **Vertical Position**, a *Full Twist* is executed, followed by a *Continuous Spin* 1440° (4 rotations). [DD 2.2]

NVT	32.0	39.0		71
PV	4.51	5.49		

3. A Cyclone is executed to a **Vertical Position**, the legs are symmetrically lowered to a **Split Position**. A *Walkover Front* is executed. [DD 2.6]

						Total
NVT	17.5	29.0	17.0	23.0	8.0	94.5
PV	1.85	3.07	1.80	2.43	0.85	

4. Manta Ray Hybrid: A Flamingo is executed to a **Surface Flamingo Position**, travelling head first. With the ballet leg maintaining its vertical position, the hips are lifted as the trunk unrolls while the bent leg moves with the knee at the surface to assume a **Fishtail Position.** The horizontal leg is lifted rapidly to a **Vertical Position**, as the body rotates 180°. The direction of the 180 rotation is closing into the vertical leg. *(Note: A right flamingo start requires the right shoulder back during the 180° rotation and a left flamingo start requires the left shoulder back during the 180° rotation)* The legs are lowered rapidly simultaneously to a **Bent Knee Surface Arch Position.** *(Note: The **Bent Knee Surface Arch Position** can be assumed by using either leg)*. The bent knee is straightened to a **Surface Arch Position** and with continuous motion, an *Arch to Back Layout Finish Action* is executed. [DD 3.1]

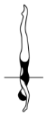
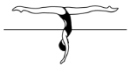
									Total
NV=	10.5	11.0	13.0	22.5	21.5	21.0	14.5	8.0	122
PV=	0.86	0.90	1.07	1.84	1.76	1.72	1.19	0.66	

5. From a **Submerged Back Pike Position**, with the legs perpendicular to the surface, a Barracuda Airborne Split is executed. [DD 2.5]

						Total
NV=	31.0	43.0	-	15.0		89
PV=	3.48	4.83	-	1.69		

JUNIOR SOLO

1. Starting in a **Submerged Back Pike Position** with the legs perpendicular to the surface, a Barracuda Airborne Split is executed. [DD 2.5]

						Total
NVT=	31.0	43.0	-	15.0		89
PV =	3.48	4.83	-	1.69		

2. Starting in a **Vertical Position**, the body rotates 360° as the legs are lowered symmetrically to assume a Split **Position.** Continuing in the same direction an additional rotation of 360° is completed as the legs are raised symmetrically to assume a **Vertical Position**. Followed by a *Continuous Spin 1080°* (3) in the same direction. [DD = 2.5]

						Total
NVT=	26.0	27.0	35.0			88
PV =	2.95	3.07	3.98			

3. 141 - Stingray
   A Flamingo is executed to a **Surface Flamingo Position**, travelling head first. With the ballet leg maintaining its vertical position, the hips are lifted as the trunk unrolls while the bent leg moves with the knee at the surface to assume a **Fishtail Position**. The horizontal leg is lifted in an arc over the surface. As it passes the vertical leg which moves symmetrically, a 180° rotation is started and is completed as a **Split Position** is assumed. A *Walkout Front* is executed. [DD 3.2]

									Total
NV=	10.5	11.0	13.0	22.5	20.5	20.0	23.0	8.0	128.5
PV=	0.82	0.86	1.01	1.75	1.60	1.56	1.79	0.62	

4. Starting in a **Vertical Position** a *Combined Spin of 720°* (2 rotations + 2 rotations) is executed. [DD 1.9]

							Total
NVT=	42.0	-	14.0				56
PV =	7.50	-	2.50				

5. Starting in a **Submerged Back Pike Position** with the legs perpendicular to the surface, a Barracuda Spin 360° is executed. [DD 2.0]

								Total
NVT=	31.0	30.0	-					61
PV =	5.08	4.92	-					

Junior Duet

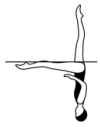
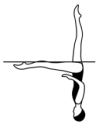
1 Starting in a **Vertical Position,** a *Full Twist* is executed as one leg is lowered to a **Bent Knee Vertical Position.** Continuing in the same direction an additional *Full Twist* is completed, as the bent knee is extended to a **Vertical Position**. Followed by a *Continuous Spin of 720°* (2 rotations) is executed. [DD 2.2]

								Total
NVT=	20.5	22.0	31.0					73.5
PV =	2.79	2.99	4.22					

2 From a **Back Layout Position** a straight leg is lifted to a **Ballet Leg Position**. The shin of the horizontal leg is drawn along the surface to assume a **Surface Flamingo Position**. The bent knee is straightened to a **Surface Ballet Leg Double Position**. Maintaining the legs vertical, the body submerges to a **Submerged Back Pike Position** until the feet are just below the surface. Executing a 360° rotation the body rises to the surface simultaneously lowering one leg with foot at the surface to assume a **Surface Flamingo Position**. The horizontal leg is straightened horizontally to a **Ballet Leg Position**. The vertical leg is lowered straight to a **Back Layout Position**. Head first travel is allowed during the Ballet Leg sequence. [DD 2.9]

								Total
NVT=	18.5	13.0	13.0	15.0	18.5	13.0	18.5	109.5
PV =	1.69	1.19	1.19	1.37	1.69	1.19	1.69	

3 Starting and maintaining a **Fishtail Position**, with the horizontal leg leading toward the vertical leg, 2 rapid rotations (720°) are executed. [DD 1.8]

								Total
NVT=	50.0							50.0
PV =	10.0							

4 A Cyclone is executed to a **Vertical Position**. A *Half Twist* is executed. Continuing in the same direction an additional rotation of 180° is executed as the legs are symmetrically opened to assume a **Split Position**. A *Walkout Front* is executed. [DD 3.0]

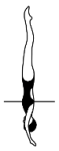
							Total
NVT=	17.5	29.0	21.0	20.0	23.0	8.0	118.5
PV =	1.48	2.45	1.77	1.69	1.94	0.68	

5 Starting in a submerged **Back Pike Position** with the legs perpendicular to the surface, a Flying Fish is executed. [DD 2.5]

						Total
NVT=	31.0	44.0	-	15.0		90.0
PV =	3.44	4.89	-	1.67		

Junior Team

1 Starting in a **Submerged Back Pike Position** with the legs perpendicular to the surface, a *Thrust* is executed to a **Vertical Position** and with no loss of height one leg is lowered to a **Bent Knee Vertical Position.** A rapid *180° Spin* is executed as the bent knee is extended to a **Vertical Position**. All movements are executed rapidly. [DD 2.3]

						Total
NVT	31.0	32.0	18.0	-		81
PV	3.83	3.95	2.22	-		

2 From a **Vertical position**, a *Twist Spin* is executed. [DD 1.8]

				Total
NVT	21.0	31.0		52
PV	4.04	5.96		

3 A Cyclone is executed to a **Vertical Position**, the legs are symmetrically lowered to a **Split Position**. A *Walkover Front* is executed. [DD 2.6]

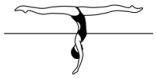
						Total
NVT	17.5	29.0	17.0	23.0	8.0	94.5
PV	1.85	3.07	1.80	2.43	0.85	

4 Manta Ray Hybrid: A Flamingo is executed to a **Surface Flamingo Position**, travelling head first. With the ballet leg maintaining its vertical position, the hips are lifted as the trunk unrolls while the bent leg moves with the knee at the surface to assume a **Fishtail Position.** The horizontal leg is lifted rapidly to a **Vertical Position**, as the body rotates 180°. The direction of the 180 rotation is closing into the vertical leg. *(Note: A right flamingo start requires the right shoulder back during the 180° rotation and a left flamingo start requires the left shoulder back during the 180° rotation)* The legs are lowered rapidly simultaneously to a **Bent Knee Surface Arch Position.** *(Note: The **Bent Knee Surface Arch Position** can be assumed by using either leg)*. The bent knee is straightened to

a **Surface Arch Position** and with continuous motion, an *Arch to Back Layout Finish Action* is executed. [DD 3.1]

									Total
NV=	10.5	11.0	13.0	22.5	21.5	21.0	14.5	8.0	122
PV=	0.86	0.90	1.07	1.84	1.76	1.72	1.19	0.66	

5 From a **Submerged Back Pike Position**, with the legs perpendicular to the surface, a Barracuda Airborne Split is executed. [DD 2.5]

						Total
NV=	31.0	43.0	-	15.0		89
PV=	3.48	4.83	-	1.69		

9. General Concepts for Deductions in Figures

9.1 General Concepts for Deductions in Figures

FINA AS10 states that all judgements are made from the standpoint of perfection.
Judges are asked to consider design: the accuracy of positions and transitions as specified in the figure description. Control: extension, height, stability, clarity, uniform motion, unless otherwise specified in the figure description. (See Appendix IV)
AS 10 states that the competitor can obtain points from 0-10 using 1/10th points
AS 10 states that all judgements are made from the standpoint of perfection of each transition within the figure, which has a numerical value based on its difficulty (NVT). Large, medium, small deductions shall be taken from the percent value of ten (PV) of each NVT as follows:

SMALL DEDUCTION - Deduction 0.1-0.5 points. A small deduction shall be taken when the unique transition follows the description of the figure with minimal deviations of 1-15 degrees.

MEDIUM DEDUCTION – Deduction 0.6-1.5 points. A medium deduction shall be taken when an attempt is made to follow the description of the transition but there are some obvious deviations of 16-30 degrees.

LARGE DEDUCTIONS - Deduction 1.6-3.0 points. A large deduction shall be taken when the transition does not conform to it description by 31 degrees or more.

Deductions for excessive travel or lack of required travel in any transition shall not exceed 0.5.

Note: A deduction may not exceed the PV of the respective transition.

The FINA Manual for Judges and Coaches outlines how the numerical value of the transition (NVT) and the proportional value (PV) of the transition should be used.
In neither the rules nor the manual is guidance given to the deductions that should be made when the transition does not conform to the transition description.

This paper endeavors to start to discuss the concept of major and minor errors in the execution of figures and elements.

The concepts are complex as rarely does just one error happen e.g. a transition from Bent Knee position to Ballet Leg position may be performed very low, very fast and lacking control, be over the face, the knee not fully extended and also travel headfirst. The judge currently has to decide are these all small/ medium/large errors and cumulatively what deduction should be made.
The following are areas to be considered.

1. **Accuracy of Unique Transitions in a Given Figure**
    - A unique transition is defined as the movement that distinguishes one root figure from another
    - Errors in performance may be deemed to be Large, Medium or Small

- Different levels of deductions must be identified for the 3 categories of error

2. **Remaining judging Factors for all other elements**
    - **Alignment** – the correct, relative stacking of body parts in order to attain a specific position
    - **Extension –**The tension created by contacting muscles to fully stretch the joints and limbs
    - **Speed –** The 3 types of speed are: **constant, rapid and accelerating**
    - **Constant** refers to the slow or moderate timing that is equal throughout the transition
    - **Rapid** infers fast, swift, quick timing
    - **Accelerating** infers continually increasing the speed throughout the transition
    - **Travel or lack thereof –** movement that is either beyond the requirement of the rules or the lack of movement that is required by rule
    - **Height –** FINA Height charts are used
    - **Angle of Split –** FINA Split angle charts are used

For the concept of Large/Small deductions to work, all transitions will require a list of agreed classifications of errors.

9.2 Deduction Guidelines for Figures

The deduction guidelines for Senior and Junior Figures, Age Group 13-14-15 Figures, and Age Group 12 and Under Figures 2017-2021 are shown as follows.

Senior and Junior Figures

Figure / (unique) transition	**Small Deviation**	**Medium Deviation**	**Large Deviation**
Barracuda Airborne Split Spin up 360			
Back Pike position	Legs up to 15 degrees from perpendicular	Legs 16 to 30 degrees from perpendicular	Legs 30 degrees or from perpendicular
	Head tucked in in Submerged Back Pike position	Back rounded in Submerged Back Pike position	
		Angle between legs and trunk 46-60 degrees	Angle between legs and trunk more than 60 degrees
Thrust	Legs up to 15 degrees from perpendicular	Legs 16 to 30 degrees from perpendicular	Legs 30 degrees or from perpendicular

	Toes out of the water before the thrust commences	Toes 6 - 12 inches below surface before rise	Toes more than 12 inches below surface before rise
		Body rising in pike so face is at the surface before unroll commences	Body rising in pike so part of the face is dry
			A hinging, not an unrolling movement. Flat back during the transition
	Soft knees		Knees bending during thrust
Vertical to Split		Not achieving the vertical prior to the split	Starting the split as the feet leave the water
Split position	*Split position using the angles chart. Over splits also errors		
	Soft knees		Very bent knees
Porpoise Twist Spin			
Front Pike Position to Vertical Position	Body up to 15 degrees from Perpendicular	Body between 16 and 30 degrees from Perpendicular	Body more than 30 degrees from Perpendicular
Continuous Spin *Apply rule if rotation not completed or too much rotation	Rotations moving around one leg		Rotations moving in a circle around the central axis
			Slow rotation
		Dropping more than ½ way from the initial Vertical height by the end of the 1st rotation	Dropping to ankles by end of 1st rotation and rotating at ankles
London Combined Spin 720			
Invert tuck to Vertical position			Body straight not rounded during the lift
Combined Spin	Holding the Vertical position too long at the ankles before starting the ascent	Starting the rotation as constant ankle height before the rise commences	Very uneven drops/rises

		Erratic drops/rises during	Obvious push up at the end of the spin up
Aurora Twirl			
Submerged double ballet leg to knight position	Incorrect timing so that the horizontal leg moves faster than the vertical leg		Taking the body down and then rising to full height
Twirl	Slightly off balance		Loosing balance at the end of the twirl
			Height dropping to below the knees after the twirl
		Slow twirl	Twist more than a twirl
Whirlwind			
Two rapid rotations	Foot of horizontal leg just off the water		Water level mid-calf on horizontal leg (foot) clear of the water.
			4 ½ rotations, not a continuous motion
Continuous spin 720 *Apply rule if rotation not completed or too much rotation		Legs joining by end of 1 ½ rotations	Legs joined by the end of the first rotation
	Uneven rotation and drop but finishing at correct height		Dropping more than ½ way down from full height after first rotation
			Very slow continuous spin
Butterfly			
Fishtail position to Fishtail position	Slow rotation	Stopping and holding the split position	Moving so fast that the rotation starts before the split is achieved
	Horizontal leg swinging/moving up to 10 degrees from position	Horizontal leg swinging/moving between 10 and 30 degrees from position	Horizontal leg swinging/moving more than 30 degrees from position

Kipswirl Split Closing 180			
Invert tuck to Vertical position (fast)			Body straight not rounded during the lift
Vertical Position	Legs/Body up to 15 degrees from Perpendicular	Legs/ Body between 16 and 30 degrees from Perpendicular	Legs/Body more than 30 degrees from Perpendicular
Split to Vertical Position			Slow rotation to Vertical
Ipanema			
Surface Arch Position to Vertical Position	Before lift, Bent Knee up to 15 degrees from perpendicular	Before lift, Bent Knee between 16 and 30 degrees from perpendicular	Before lift, Bent Knee more than 30 degrees from perpendicular
	*There should be a section in the height chart specifically for this position		
Vertical to Front Pike position And/or during the lift to Vertical	Body moving forward up to 15 degrees from Perpendicular	Body moving forward between 16 and 30 degrees from Perpendicular	Body moving forward more than 30 degrees from Perpendicular
Front pike, rapid 180 degree rotation to vertical	180 degree rotation starts when feet are off the water	180 degree rotation starts when legs are almost ½ way up to vertical	Legs lifting to almost vertical before the 180 degree rotation starts
			Very slow rotation

Age Group 13-14-15 Figures

Figure / (unique) transition	Small Deviation	Medium Deviation	Large Deviation
Rio			
Double Ballet Leg to Submerged Back Pike position	Legs up to 15 degrees from perpendicular	Legs 16 to 30 degrees from perpendicular	Legs 30 degrees or from perpendicular
	Head tucked in in Submerged Back Pike position	Back rounded in Submerged Back Pike position	
		Angle between legs and trunk 46-60 degrees	Angle between legs and trunk more than 60 degrees
Thrust	Legs up to 15 degrees from perpendicular	Legs 16 to 30 degrees from perpendicular	Legs 30 degrees or from perpendicular
	Toes out of the water before the thrust commences	Toes 6 - 12 inches below surface before rise	Toes more than 12 inches below surface before rise
		Body rising in pike so face is at the surface before unroll commences	Body rising in pike so part of the face is dry
			A hinging, not an unrolling movement. Flat back during the transition
	Soft knees		Knees bending during thrust
Vertical position	Legs up to 15 degrees from perpendicular	Legs 16 to 30 degrees from perpendicular	Legs 30 degrees or from perpendicular
Ariana			
Surface Arch to Split Position	Low throughout movement	Erratic speed and height	Lifting at knee height and then rising in Knight position
	Body forward up to 15 degrees in Split position		Leg lifting very quickly and then much slower from Knight position to Split position
Rotation from Split to Split	*See an angle chart for splits		

Jupiter			
Fishtail Position to Knight Position	Angle between legs closing or opening from 90 degrees less than 10 degrees	Angle between legs closing or opening from 90 degrees between 11-20 degrees	Angle between legs closing or opening from 90 degrees more than 21 degrees
Knight position to Fishtail position	Vertical leg up to 10 degrees from perpendicular	Vertical leg between 11 and 20 degrees from perpendicular	Vertical leg more than 21 degrees from perpendicular
Oceanea			
Surface Arch Position to Vertical Position	Before lift, Bent Knee up to 15 degrees from perpendicular	Before lift, Bent Knee between 16 and 30 degrees from perpendicular	Before lift, Bent Knee more than 30 degrees from perpendicular
	*There should be a section in the height chart specifically for this position		
Continuous Spin 720 *Use the rule for not completing the spin			Slow rotation
		Dropping more than ½ way from the initial Vertical height by the end of the 1st rotation	Dropping to ankles by end of 1st rotation and rotating at ankles
Albatross ½ Twist			
Back Layout to Pike Position		Arch to nearly a Surface Arch Position before starting the rotation	Rotating from the surface
Pike Position to Vertical Bent Knee Position	Body up to 15 degrees from perpendicular	Body between 16 and 30 degrees from perpendicular	Body over 31 degrees from perpendicular
Pike Position to Vertical Bent Knee Position		Toe of joining leg below ankle when vertical is achieved	
		Starting to bend the leg so toe of bending leg is at the ankle of extended leg before lift commences	Starting to bend the leg so toe of bending leg is higher than the ankle of extended leg before lift commences
Twists		Circle of up to ½ metre diameter	Circle of ½ metre or more diameter

Swordtail			
Surface Arch Bent Knee Position to Knight Position	Foot/leg up to 15 degrees from perpendicular as it is lifted to knight	Foot/leg between 16 and 30 degrees from perpendicular as it is lifted to knight	Foot/leg more than 30 degrees from perpendicular as it is lifted to knight
Front Layout Bent Knee Position to Surface Arch Bent Knee Position			Body piked as the leg is lifted
	*Travel is as per the proposed FINA rule re deductions for travel		
Porpoise Continuous spin 720			
Front Pike Position to Vertical Position	Body up to 15 degrees from Perpendicular	Body between 16 and 30 degrees from Perpendicular	Body more than 30 degrees from Perpendicular
Continuous Spin *Apply rule if rotation not completed or too much rotation			Slow rotation
		Dropping more than ½ way from the initial Vertical height by the end of the 1st rotation	Dropping to ankles by end of 1st rotation and rotating at ankles
Seagull			
Inverted Tuck Position to Vertical Position (fast)			Body straight not rounded during the lift
Vertical Position	Legs/Body up to 15 degrees from Perpendicular	Legs/ Body between 16 and 30 degrees from Perpendicular	Legs/Body more than 30 degrees from Perpendicular
Vertical Position to Split Position			Starting the split before the vertical has been achieved
	Split of 150-170 degrees	Split of 120-149 degrees	Split of less than 119 degrees
To Vertical Position	Joining split at mid thigh	Joining split at knees	Joining split below the knees
Vertical and Vertical Descent	Legs/Body up to 15 degrees from Perpendicular	Legs/ Body between 16 and 30 degrees from Perpendicular	Legs/Body more than 30 degrees from Perpendicular

			Descent Fast; not at the same speed as the beginning of the figure

Age Group 12 and Under Figures

Figure/ transition	Small Deviation	Medium Deviation	Large Deviation
Straight Ballet Leg			
Back layout to ballet leg *	Body travels forward or headfirst up to 15 cm (6 in) as leg is lifted	Body travels forward or headfirst more than 15 cm (6 in) as leg is lifted	
	BL is 15 degrees short of/or beyond perpendicular	BL is 16 - 30 degrees short of/ or beyond perpendicular	BL is 31 degrees or more. short of/or beyond perpendicular
	Hips drop up to 7 1/2 cm (3 in) as BL is lifted	Hips drop 10 -30 cm (4 - 12 in) to inches as BL is lifted	Hips drop more than 32 1/2 cm (13 in) or more as BL is lifted
		Shoulders rounded, head is forward	Body sitting in water more than 30 cm (12 in), head off the water
	Knees soft	Knees slightly bent	One or both knees bent 30 degrees or more
Ballet leg to Bent Knee Back Layout Position	As leg bends, thigh is 1-15 degrees from perpendicular	As leg bends, thigh is 16-30 degrees from perpendicular	As leg bends, thigh is 30-45 degrees from perpendicular
	Hips near surface,		Hips deep shoulders rounded, head off surface
Bent Knee Back Layout Position to Back Layout	Body reaches layout but extension is soft as hips rise to surface, shoulders slightly forward	Body reaches layout but extension is soft as hips rise to surface, shoulders slightly forward	Poor extension through out, body sitting and head is off surface
Barracuda			
Back Layout to submerged Back Pike Position	Legs lifted to mid thigh level pike is near 45 degrees	Below knees is only part of legs lifted and pike is 60 degrees or greater	Buttocks move forward as legs drop below surface without any lift
Thrust	Legs up to 15 degrees from perpendicular	Legs 16 to 30 degrees from perpendicular	Legs 30 degrees or more from perpendicular

	Toes 7-12cm (3-5 in) below surface before rise	Toes 15-30 cm (6-12 in) below surface before rise	Toes more than 30 cm (12 in) below surface before rise
	Legs up to 15 degrees beyond vertical	Legs 16 30 degrees beyond vertical	Legs more than 30 degrees beyond vertical
		Body rising in pike so face is at the surface before unroll commences	Body rising in pike so part of the face is dry
			A hinging, not an unrolling movement
		Thrust is faster than layout to Back Pike Position but not rapid	Thrust is slow
Vertical descent	Legs or torso 1-15 degrees short or beyond perpendicular	Legs or torso 31-45 degrees short or beyond perpendicular	Legs and torso 46 - 60degrees short or beyond perpendicular 61 degrees short or beyond perpendicular = FAILED
Walkover Back			
Dolphin start to Surface Arch	Feet and legs travel 30 cm (12 in) or less along surface	Surface arch Position not shown	No Dolphin start, head and shoulders press backward to Surface Arch Position
Surface arch to split	Body travels forward or headfirst up to 15 cm (6 in.) as leg is lifted	Body travels forward or headfirst more than (6 in) as leg is lifted	Hips drop 31 cm (13 in) or more as leg is lifted
	Low throughout movement Hips drop 7 cm (3 in) or more as BL is lifted	Hips drop 9 1/2- 30cm (4-12 in) as leg is lifted	Lifting at knee height and then rising in knight position
		Erratic speed and height	Leg lifting very quickly and then much slower from knight to split or vice versa
		Body pauses in Knight Position	Body stops in Knight Position
	Body forward up to 15 degrees from perpendicular in split position	Body forward 16-30 degrees from perpendicular in split position	Body forward 31 degrees or more from perpendicular

	Hips out of alignment 1-15 degrees from center point of horizontal axis	Hips out of alignment 16-30 degrees from center point of horizontal axis torso rotated 16-30 degrees from perpendicular	Horizontal axis between legs in split not parallel to wall, torso rotated more than 31-45 degrees from perpendicular Chinese Split= Failed
Split to Front Pike Position	Body forward from perpendicular up to 15 degrees during transition to pike	Body forward from perpendicular between 16 and 30 degrees during the transition to pike	Body forward from perpendicular 31-45 degrees during the transition to pike
Front Pike Position to Front Layout Position.	Body hinges upward with minimal foot first travel	Body hinges upward without any foot first travel	
	Arch in upper back in layout	Head and feet at surface in layout, rest of body below surface	
	Feet slightly below surface	Feet below surface up to 15 degrees below surface	
Ballerina			
Front Layout to Submerged Ballet Leg Double	Head and torso move forward and downward with forward travel of buttocks, legs and feet on surface only 16-30 cm (7-12in),	Head and torso move forward and downward with minimal forward travel of buttocks, legs and feet on surface, only 1-15 cm (up to 6 in)	Torso hinges downward and backward to front pike position, no travel forward of buttocks, legs and feet
	Partial somersault is executed using proper axis during rotation	Partial somersault is executed attempting to use proper axis but it moves during rotation	Partial somersault executed with hips as axis
	Pike between 61 and 80 degrees	Pike between 46 and 60 degree	Pike is not 90 degrees but 45 degrees or tighter
Submerged Double Ballet Leg Position to Submerged Flamingo Position	As one leg is lowered to Submerged Flamingo Position vertical leg up to 15 degrees short or beyond perpendicular or leg is perpendicular and torso is up to 15 degrees short of or beyond horizontal	As one leg is lowered to Submerged Flamingo Position vertical leg up to 16-30 degrees short or beyond perpendicular or leg is perpendicular and torso is up to 16-30 degrees short of or beyond horizontal	As one leg is lowered to Submerged Flamingo Position vertical leg is 31 -45 degrees short or beyond perpendicular or leg is perpendicular and torso is 31-45 degrees short of or beyond horizontal
Submerged Flamingo Position to Surface Flamingo Position	Shoulders back, position of legs good and torso is 61 - 80 degrees from perpendicular leg	Shoulders rounded, torso is 46-60 degrees from perpendicular leg	Shoulders rounded, head forward knee of bent leg too close to chest

Surface Flamingo Position to Bent Knee Back layout Position	Knee of BL is soft as leg as straight leg is lowered to surface	Knee of BL is bent up to 16 degrees as leg is lowered to surface	Knee of BL is bent 17 degrees or more as leg is lowered to surface
	Bent knee arrives at Bent Knee Position just after BL is on surface	Bent knee moves to Bent Knee Position after BL is more than 30 degrees from perpendicular	Bent knee moves to Bent Knee Position after BL is on surface Bent knee is extended to layout as BL is bent to Bent Knee Back Layout Position = Failed
Bent Knee Back Layout to Back Layout Position	Body reaches layout but extension is soft as hips rise to surface, shoulders slightly forward	Body reaches layout but extension is soft as hips rise to surface, shoulders slightly forward	Poor extension through out, body sitting and head is off surface
Kip			
Back Layout Position to Inverted Back Tuck Position	As body moves into tuck position head moves off the surface toward knees to assume tuck position	Head and torso move toward feet to assume a tuck position	Head and torso move toward feet to assume a tuck position
Inverted Back Tuck position to Vertical Position	Shins up to 15 degrees short or beyond perpendicular	Shins 16-30 degrees short or beyond perpendicular	Shins 31-45 degrees short or beyond perpendicular
	Tuck could be tighter	Head out of line	Knees off chest, head not tucked in
	Body unrolls and legs extend upward simultaneously but vertical attained is slightly in front of or behind midway point described	Legs move to vertical and then back unrolls under legs	Head and back move to vertical legs open at hips (thighs parallel to surface of water and legs straighten to vertical
			Head leads shoulders backward to open tuck
Vertical Descent	Legs or torso 1-15 degrees short or beyond perpendicular	Legs or torso 31-45 degrees short or beyond perpendicular	Legs and torso 46 - 60degrees short or beyond perpendicular 61 degrees short or beyond perpendicular = FAILED

Swordfish			
Front layout Bent Knee to Bent Knee Surface Arch Position		Back flat during the lift	Piking at start of the lift
			Throwing the leg up. Lifting in 1 count
	*Travel is as per the proposed FINA rule re deductions for travel		No lift of the leg, body moving back under the foot
Surface Arch Bent Knee Position	Bent Knee up to 15 degrees from perpendicular	Bent Knee between 16 and 30 degrees from perpendicular	Bent Knee more than 30 degrees from perpendicular
Swan			
Back Layout to Bent Knee Surface Arch Position	Minimal head first travel of 30 cm or less	Body arrives in Surface Arch Position just prior to knee bend	No Dolphin start, head and shoulders press backward, Surface Arch Position shown before knee bends
		Surface Arch Position not shown	
Bent Knee Surface Arch to Knight Position	Travel forward or backward up to 15 cm (6 in)	Travel forward or backward 16 cm (6 1/2 in) or beyond	
	Back and head up to 15 degrees forward or beyond perpendicular	Back and head up to 16 - 30 degrees forward or beyond perpendicular	Back and head 31 degrees or more forward of perpendicular
	Vertical leg up to 15 degrees short or beyond perpendicular	Vertical leg up to 16 - 30 degrees short or beyond perpendicular	Vertical leg 31 degrees or more short or beyond perpendicular
	Knee of horizontal leg is soft	Knee of horizontal leg is bent	Knee of horizontal leg is bent 30 degrees or more
		Hips are not parallel and horizontal leg turned outward	Hips are not parallel (15 degrees or more) and horizontal leg turned outward with knee cap perpendicular to surface
Rotation from Knight Position to Fishtail Position *		Horizontal leg moves side to side during rotation	Vertical leg makes a circle during 180 degree rotation toward horizontal leg (off of axis)
	Torso and/or leg arched or piked up to 15 degrees from perpendicular	Torso and/or leg arched or piked 16-30 degrees from perpendicular	Torso and/or leg arched or piked 31-45 degrees from perpendicular

	Extension in fishtail evident but soft		
Fishtail to Front Pike Position	Timing a little slower than other transitions	Timing much faster than other transitions	
	Torso arched or piked 1-15 degrees from perpendicular	Torso arched or piked 16-30 degrees from perpendicular Front Pike Position not shown	Torso arched or piked 16-30 degrees from perpendicular Front Pike Position not shown
Front Pike to Front Layout Position	Body hinges upward with minimal foot first travel	Body hinges upward without any foot first travel	
	Arch in upper back in layout	Head and feet at surface in layout, rest of body below surface	
	Feet slightly below surface	Feet below surface up to 15 degrees below surface Torso arched or piked 16-30 degrees from perpendicular	
Water Drop			
Front Layout Position to Front Pike Position	Hips do not replace position of head, moving forward 15-30 cm (6-12 in)	Hips do not replace position of head, moving forward up to 14 cm (5 1/2in)	No forward movement body hinges down to pike position
	Torso and head up to 15 degrees short or beyond perpendicular	Torso and head 16-30 degrees short or beyond perpendicular	Torso and head 31-45 degrees short or beyond perpendicular
Legs lifted to Bent Knee Vertical Position *	Legs are lifted to vertical assuming Bent Knee Position just after vertical is reached	Legs are lifted to vertical as they move to Bent Knee Position, arriving in bent knee prior to vertical	Legs are lifted to vertical movement to Bent Knee Position is delayed
180 degree Spin as bent knee extends to vertical *	Extended legs and body with legs up to 15 degrees short of perpendicular and body same degrees beyond vertical and vice versa	Extended legs and body with legs 16 - 30 degrees short of perpendicular and body same degrees beyond vertical and vice versa	Extended legs and body with legs 31 - 45 degrees short of perpendicular and body same degrees beyond vertical and vice versa Deviation 45 degrees or more = FAILED
		Rotation on axis but extension soft may give appearance of being wobbly	Rotation about an axis outside of body (usually behind)

			Rotation about axis on side of body
	Drop spaces and extension of bent knee slightly off	Bent knee fully extended before ankles reach surface	Bent knee fully extended as calves reach surface