



FÉDÉRATION
INTERNATIONALE
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A R T I S T I C S W I M M I N G

INTRODUCTORY GUIDE FOR THE USE OF DIFFICULTY TABLES

FINA Artistic Swimming Innovation Group

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Dear AS Family,

Over the last three years the Innovation Group has been working in the specific area of difficulty in routines looking for opportunities to improve or enhance the mutual comprehension of the issue among coaches, athletes, judges, media and audience.

Athletes and coaches have boosted the sport to an unbelievable level of difficulty with their athleticism and hard work, and continue to do so each season. As a result of the sport's growth and development routines are more and more amazing and awe inspiring but with an underlying complexity very hard to analyze and judge at a first sight.

Fortunately, we have solid foundations built by the enormous contributions of great coaches and judges who developed our Manual and DD Reports.

This document is the result of the Innovation Group's internal work done up to now, with the precious help of the group of FINA Lecturers and TASC Members that tested our intermediate steps. Their comments and questions helped us to progress.

We present to you the work done in routine hybrids and transitions. This document is meant to explain the use of the "hybrid difficulty table" that needs to be tested by you.

The first goal is to check if you find in our descriptions all possible combinations of different components of a hybrid (movements), as well as the added values (bonuses) specific for routines -number of swimmers, apnea time, patterns, placement.... etc.

The second goal is to do the same with the transitions that happen from one hybrid to the other using the "transitions difficulty table".

For your information, the values for movements that you will see in the difficulty tables, calculator or coach card have been obtained by normalising current values inside our transitions categories. Bonus values and the transitions difficulty table have been assigned after internal testing by the Innovation Group according to the appreciated subjective difficulty and trying to be proportionate to the difficulty values of movements. Extensive testing will reveal the validity and adjustments will be applied if required.

We highly appreciate your participation in continued testing.



HYBRIDS

Hybrid difficulty **COMPONENTS** are considered under three areas:

1. BASE MARK

NUMBER OF MOVEMENTS PERFORMED (NM)

and

TIME UNDERWATER (TU)

2. MOVEMENTS that compose all transitions in a hybrid, grouped in “families” (see document “Artistic Swimming Difficulty System: The Description”), namely:

1. THRUSTS (T)
2. ROTATIONS (R)
3. FLEXIBILITY (F)
4. AIRBORNE WEIGHT (AW)
5. CONNECTIONS (C)

3. Added difficulty factors specific to routines (**BONUS**)

1. TRAVELING (TR)
2. ANGLES (A)
3. PLACEMENT (PL)
4. SYNCHRONISATION (SY)
(Number of swimmers performing same movement at same time)
5. PATTERN CHANGES (PC)
(Teams, Free Combination and Highlight Routine)

GENERAL PRINCIPLES

- a) When Vertical Position (VP) is indicated it includes variants of 2 legs close to vertical (legs can be up to 45° off from vertical)
- b) When a **movement** (other than a Rotation or Thrust), is repeated during a hybrid it may be counted only two times taking always the highest values. For example: If there are three flexibility movements performed; 2 of Level 1 and 1 of Level 3, the value declared should be 1 x Level 1 + 1 x Level 3.
- c) Each Rotation (R) and Thrust (T) movement adds its value regardless of the number of repetitions.
- d) If a Rotation (R) is declared (such as a Twist 360° with two legs) then Airborne Weight (AW) should not also be declared because the Twist already has the difficulty of Airborne Weight taken into consideration in its value.
- e) Regarding **bonus** repetitions during a hybrid: traveling is counted once per hybrid and each pattern change in a hybrid is counted either as a Simple Pattern Change (PC-S) or a Complex Pattern Change (PC-C) - see page 11.
- f) In **teams**: when a hybrid movement or bonused action is not performed by all team members its value will be factored by *0.5 (half of swimmers included), or by *0.3 (less than half of swimmers included). This principle applies in pair actions where just one swimmer is performing an action while the other performs surface accompaniment.



BASE MARK

Base Mark is the difficulty value that a hybrid has according to the time spent underwater (TU) and the number of movements performed (NM).

$$\text{BM} = \text{NM} + \text{TU}$$

These two parameters are common to all possible hybrids, from easiest to hardest.

If the Hybrid has no “Families” movements or Bonuses, the Base Mark is applied.

1. NUMBER OF MOVEMENTS (NM)

- **Definition of a Hybrid Movement** = a definitive change in the position or direction of the lower limbs as mandated by the choreography of the routine.
- Spins: each $\frac{1}{2}$ turn (180°) shall count as 1 movement
- Twists: each $\frac{1}{2}$ turn (180°) shall count as 1 movement
- Twirls: each $\frac{1}{2}$ turn (180°) shall count as 1 movement
- A “swirl” action counts as one movement from it’s beginning to its clear stopping point or next clear action as momentum/force must be considered.
- Fast kick type actions (for example fast “tendu” like action similar to ballet: movement in ballet where the working leg is extended along the floor until only the tip of the toe remains touching the floor) shall count as 1 movement (i.e. there is a clear exertion of energy/muscle tension and then a recovery)
- In regards to **entries** and **exits**:
 - Front Pike Pulldown - the action of the body bending into the pike position is movement, with counting continuing from there
 - Entry from a Ballet Leg - A Ballet Leg kick counts in the hybrid if used as an entry into the hybrid (kick up and then a Catalina like rotation, kick up and then into inverted tuck, etc.)
 - No movements shall be counted underwater – for example, a tuck from ankles at the end of a spin would count as one movement, however if the athlete(s) tuck when completely submerged no movement shall be counted
- In regards to **“back-to-back”** hybrids:
 - Shall be ONE hybrid if no breath is taken in between. For example, a hybrid is executed and then a front walkout ending appears to be taking place BUT the athlete(s) DO NOT break their face and breathe and instead tuck and continue with more movements. This is ONE hybrid, totalling all movements.
 - In comparison IF the athletes face(s) break the surface and they breathe in Back Layout the hybrid has ended, and if they continue into another hybrid it will be considered a separate hybrid with movements counted accordingly.



- In regards to **Cadence** (team hybrids only):
 - Each cadence movement shall count as 1 movement. You do not count the movements of each athlete as they all do the same action, but on their own counts.
- Number of movements in a hybrid will be given credit in 4 categories:
 - **(1)** 6 movements or less
 - **(2)** 7-19 movements
 - **(3)** 20-29 movements
 - **(4)** 30+ movements

2. TIME UNDERWATER (TU)

- **STAND-ALONE HYBRID:**
Hybrid underwater time shall be timed from “breath to breath” – from taking entry breath to go under (pull down, arch back, body boost, etc.), to first surfacing breath after completing the hybrid (roll up from walkout, body boost, eggbeater surfacing, etc.)
- **ACRO/DIVE-IN INTO HYBRID:**
In the case that a hybrid takes place in combination with an acrobatic movement/highlight OR from directly after the dive-in, the underwater time shall be counted from the first movement of the hybrid to the surfacing breath.
- **HYBRID FOLLOWED BY ACRO:**
In the case that the hybrid takes place in combination with an acrobatic movement/highlight occurring directly after a hybrid, the underwater time shall be counted from taking the entry breath, to the last movement of the hybrid.
- Time underwater will be given credit in 3 categories:
 - **Short** 6 seconds or less
 - **Medium** 7-15 seconds
 - **Long** 16 - 20 seconds and over



FAMILIES OF MOVEMENTS

1. THRUSTS (T)

This group includes variations of thrusts.

When “Thrust” is stated it means two legs, otherwise one leg is stated.

a) Level 1

Thrust with crashing on the surface (means “not completed” thrust: From a Submerged Back Pike Position, a vertical upward movement of the legs and hips is rapidly executed as the body unrolls to assume a Vertical Position) and continues by “falling” on the surface)

b) Level 2

Thrust with one leg: Thrust with the Bent Knee Vertical Position or Thrust in a Fishtail position

c) Level 3

Thrust with one leg followed by rotation of Spin 360°

Thrust and vertical descent

Thrust may be followed by leg movements **while descending**

d) Level 4

Thrust with one leg followed by rotation of Spin 720° or Twirl 180°

Thrust with flexibility at maximum height, like Airborne Split Position or Vertical to Knight, with any ending except crashing on the surface.

e) Level 5

Thrust followed by rotation of Spin 360° or Twirl 180° (During rotation, leg movements can be performed close to the vertical position).

f) Level 6

Thrust with flexibility followed by rotation of Spin 360°

(Example: Thrust with Airborne Split Position or splits that show body alignment under hips, as described in BP. Body alignment means: Lower back arched, with hips, shoulders and head on a vertical line).

g) Level 7

Thrust with rotation of Spin 720° and over.

(Thrust continued by Spin or Continuous Spin)

h) Level 8

Thrust with flexibility followed by rotation of Spin 720° and over

(Example: Thrust with Airborne Split Position or splits that show body alignment under hips, as described in BP. Body alignment means: Lower back arched, with hips, shoulders and head on a vertical line).



i) Level 9

Thrust continued by catching a sustained Vertical Position with or without movements (sustained vertical position: see 5 e).

2. ROTATIONS (R)

This group includes all types of rotations: Twists, Spins, Twirls (as defined in AS Rulebook BM) and swirls (rotation performed in a pike position or other positions where body is not aligned with its vertical axis).

For descending spins, the definition of degrees is by the submersion of the toes, OR when the rotation has come to a complete stop.

For ascending spins, the definition of degrees begins when the toes break the water's surface, OR when the rotation begins.

Various modifications of leg positions during rotations are allowed.

Rotations with one leg (Bent Knee Vertical Position, Fishtail, Crane, Knight) and other position options.

Rotations with two legs (Vertical Position "VP", Fishtail close to vertical, Arched VP) and other positions where 2 legs are clearly visible close to the vertical line.

A **Combined*** Spin will be counted only in the case of the same number of down and up or up and down rotations with no stop.

A **Reversed*** rotation (Spin or Twist) means rotation in one direction, and without any pause immediately start rotation in the opposite direction

**Please note the above is different than definition in the FINA Rulebook.*

If there are several rotations in a hybrid, it is recommended to separate them from each other by other movements (unless it is a Combined Spin). For example – If an R3 and R5 please put extra movements between them.

Twisting (any amount) or Twirling at the ankles (not considered as spin ending) will be credited as per number of movements.

a) Level 1 includes rotations with **one or two legs:**

Swirl 180°-360°

b) Level 2 includes rotations with **one or two legs:**

Swirl 720°-1080°

Spin descending 180°

Twist 180° with **1 leg only**



b) Level 3 includes rotations with **one or two legs**:

Swirl 1440°

Spin ascending 180°-360°

Spin descending 360°-720°

Twist 180° with **2 legs**

Twist 360° with **1 leg only**

c) Level 4 includes rotations with **one or two legs**:

Spin ascending 720°-1080°

Spin descending 1080°-1440°

Twist 360° with **2 legs**

d) Level 5 includes rotations with **one or two legs**:

Twist 720° with **1 leg**

Spin ascending 1440° with **1 leg**

Spin descending more than 1440° with **2 legs**

Twist opening 360° Vertical Position to Split

Twirl 180°-360° with **2 legs**

Combined Spin 360°-720° with **1 leg**

e) Level 6 includes rotations with **one or two legs**:

Combined Spin 360° with **2 legs**

Reversed Combined Spin 360°-720° with **1 leg**

Spin ascending 1440° with **2 legs**

Twist 720° with **2 legs**

Twist Closing 360° from Split to Vertical Position

f) Level 7 includes rotations with **two legs only**:

Combined Spin 720°

Reversed Combined Spin 360°

Twist 1080°

Unbalanced 360° Twist

Reversed Twist 360°

g) Level 8 includes rotations with **two legs only**:

Combined Spin 1080°

Reversed Combined Spin 720°

Twist 1440°

Unbalanced 720° Twist

Reversed Twist 720°

h) Level 9 includes rotations with **two legs only**:

Combined Spin 1440°

Reversed Combined Spin 1080°

Unbalanced 1080° Twist



3. FLEXIBILITY (F)

Difficulty increases with the inclusion of hybrid figures that require an extreme range of flexibility (bring a joint to its maximum range of motion), such as Walkouts, Nova lift, Aurora open, Knight and Split.

All positions should be shown with maximum strength in legs and a body position that demonstrates the flexibility of the athletes.

The duration of execution should be sufficient to clearly identify the difficulty by the technical controllers.

a) Level 1

- Pike to Split
- Tub to Split
- Tuck to Split
- Bent Knee Vertical or Fishtail to Split

b) Level 2

- Ariana rotation or split variants at the surface
- Walkout Front
- Back Layout to Surface Arch or Bent Knee Surface Arch
- Split opening from Vertical Position

c) Level 3

- Split to Split through Vertical Position
- Split closing to Vertical Position

d) Level 4

- Front Layout to Surface Bent Knee Arch Position or a Split (Example – Swordfish like movement)
- From Surface Arch Position to Knight or Split

e) Level 5

- Knights: combinations of Knight positions
- Knight to Fishtail (through Vertical Position)
- Knight to Vertical Position
- Sustained Knight Position

f) Level 6

- Surface Arch to Vertical Position



4. AIRBORNE WEIGHT (AW)

Amount of body out of the water. This group includes:

a) Level 1

Vertical descent in Bent Knee Vertical Position or Fishtail join to Vertical Position descending (not as part of a Thrust or a Spin)

b) Level 2

Vertical descent in Vertical Position (not as part of a Thrust or a Spin)
Front Pike to Vertical Position

c) Level 3

Sustained height with one leg (Bent Knee Vertical Position or Fishtail)
Vertical ascent in Vertical Position or Bent Knee Vertical Position (not as part of an ascending spin)
Descending or ascending Vertical Position performing isolated movements (one leg stays in a fixed position while the other performs movements with body in vertical alignment with fixed leg)

d) Level 4

Sustained height in Vertical Position lasting less than 3"
Isolated movements performed in stable Fishtail Position and piked body position (legs over surface, 30° to 60° from vertical) lasting less than 3"

e) Level 5

Sustained height in Vertical Position lasting equal or more than 3"
Isolated movements performed in stable Fishtail Position and piked body position (legs over surface, 30 to 60° from vertical) lasting equal or more than 3". Any knee/leg movements performed credited in number of movements.

f) Level 6

Sustained height shown at least 3" in Vertical Position performed in an unbalanced position. Any knee/leg movements performed credited in number of movements.

5. CONNECTIONS "C"

When swimmers join or link together, they create a "connection" action.

The swimmers must be touching in some manner during the performance of the connection action.

This is awarded once per connection and it does not matter how many times the positions are changed.

a) Level 1

Plane connection (surface connection)

When swimmers are connected by any part of the body in the Back Layout Position, Front Layout Position, Side Layout Position or Pike position at the surface of the water.



b) Level 2

One leg face-to-face connection

When swimmers are connected with one leg facing each other in any vertical position.

c) Level 3

One-leg back connection

When swimmers are connected with one leg back or to side of each other in any vertical position.

d) Level 4

Two-leg connection

When swimmers are connected with two legs facing, back or side to each other in any vertical position.

e) Level 5

Rotation vertical connection with one leg

When swimmers are connected with one leg facing, back or side to each other in any vertical position while performing a rotation.

f) Level 6

Rotation vertical connection with two legs

When swimmers are connected with two legs facing, back or side to each other in any vertical position while performing a rotation.

BONUS

1. TRAVELING (TR)

Movement of all swimmers of more than 1.0m during the hybrid.

If the Hybrid started at one point in the pool and finished at another point in the pool, having covered more than 1.0m, then a traveling bonus will be awarded.

Any pattern changes taking place during the hybrid are not considered as traveling (see Bonus 5. Pattern Change).

The Traveling bonus may be awarded only once per hybrid.

2. ANGLES (A)

Angles are not considered for Solo, they may be credited as unbalanced positions in the difficulty table.

a) Simple Angles (A-S)

The hybrid shows angles but there is not more than 1 complex angle (see definition of complex angles below).



b) Complex Angles (A-C)

The hybrid shows 2 or more complex angles.

Definition of complex angles:

- Large joint movements involving different axes and planes
- Positions where several joints are angled (toes, ankle, knee, hip...)
- Those figures that have micro movements of one of the joints (example knee)
- Those that involve a considerable displacement of the center of gravity or in continuous displacement
- Angles which involve unbalanced movements

3. PLACEMENT (PL)

Moment in routine time when the hybrid is performed.

Bonus applied when a hybrid is performed during the last 20 seconds of the routine

4. SYNCHRONISATION (SY)

Synchronisation of part or whole hybrid means that all athletes perform the same movements at the same time.

Partial Synchronisation (SY-P)

This bonus is awarded for synchronized parts in a hybrid that consist of 3 or more movements. The bonus can be added not more than 2 times per hybrid.

Full Synchronisation (SY-F)

This bonus is awarded for a fully synchronized hybrid, with a maximum of 3 asynchronous movements.

5. PATTERN CHANGE (PC)

Changes of formations made by the spatial relationship between members of a team.

Each pattern change in a hybrid is counted either as a Simple Pattern Change (PC-S) or a Complex Pattern Change (PC-C). For example, if a hybrid has 3 pattern changes and 2 are simple and 1 is complex this would be: "2PC-S + 1 PC-C".

a) Simple pattern change (PC-S)

Those where athletes see each other and can control the accuracy of the pattern.

b) Complex pattern change (PC-C)

Changes from large patterns to compact patterns and from compact patterns to larger patterns.

Blind pattern changes where athletes cannot see each other while performing back or side pattern changes.

NOTE: Traveling of all athletes in the same direction while maintaining the pattern is not a pattern change - this is Traveling (see Bonus 1.)



HYBRID DIFFICULTY TABLE:

HYBRID DIFFICULTY TABLE					
HYBRID BASE MARK					
Number of movements (NM): 6 or less 7-19 20-29 30+			Time underwater(TU): Short (6" or less) Medium (7" - 15") Long (16"-20" and over)		
HYBRID BONUSES					
Bonuses	Traveling (TR): More than 1m	Angles (A): Simple angles Complex angles	Placement: (PL) Hybrid in last 20"	Synchronisation (SY): Partial Synchronisation Full Synchronisation	Pattern Change (PC): Simple pattern changes Complex pattern changes
FAMILIES					
LEVELS	Thrusters (T)	Rotations (R)	Flexibility (F)	Airborne Weight (AW)	Connections (C)
Level 1	Thrust with crashing	One or two legs: Swirl 180°-360°	Pike to Split Tuck to Split Bent Knee VP or Fishtail to Split	Vertical descent in Bent Knee VP or Fishtail join to VP	Plane connection (surface connection)
Level 2	Thrust with one leg	One or two legs: Swirl 720°-1080° Spin descending 180° Twist 180° with 1 leg only	Ariana rotation or split variants at the surface Walkout Front Back Layout to Surface Arch or Bent Knee Surface Arch Split opening from VP	Vertical descent in VP Front Pike to Vertical Position	One leg face-to-face connection
Level 3	Thrust with one leg followed by rotation of Spin 360° Thrust and vertical descent	One or two legs: Swirl 1440° Spin ascending 180°-360° Spin descending 360°-720° Twist 180° with 2 legs Twist 360° with 1 leg only	Split to Split through VP Split closing to VP	Sustained height with one leg Vertical ascent in VP or Bent Knee VP Descending or ascending VP performing isolated movements	One leg back connection
Level 4	Thrust with one leg followed by rotation of Spin 720° or Twirl 180° Thrust with flexibility	One or two legs: Spin ascending 720°-1080° Spin descending 1080°-1440° Twist 360° with 2 legs	Front Layout to Surface Bent Knee Arch Position or a Split From Surface Arch Position to Knight or Split	Sustained height in VP less than 3" Isolated movements performed in stable Fishtail Position and piked body position (legs over surface, 30-60° from vertical) lasting less than 3"	Two-legs connection
Level 5	Thrust followed by rotation of Spin 360° or Twirl 180°	One or two legs: Twist 720° with 1 leg Spin ascending 1440° with 1 leg Spin descending more than 1440° with 2 legs Twist opening 360° VP to Split Twirl 180°-360° with 2 legs Combined Spin 360°-720° with 1 leg	Knights: combinations of Knight positions Knight to Fishtail (through VP) Knight to VP Sustained Knight Position	Sustained height in VP lasting equal or more than 3" Isolated movements performed in stable Fishtail Position and piked body position (legs over surface, 30-60° from vertical) lasting equal or more than 3". Any knee/leg movements performed credited in n° of movements	Rotation vertical connection with one leg
Level 6	Thrust with flexibility followed by rotation of Spin 360°	One or two legs: Combined Spin 360° with 2 legs Reversed Combined Spin 360°-720° with 1 leg Spin ascending 1440° with 2 legs Twist 720° with 2 legs Twist Closing 360° from Split to VP	Surface Arch to VP	Sustained height shown at least 3" in VP performed in an unbalanced position. Any knee/leg movements performed credited in n° of movements	Rotation vertical connection with two leg
Level 7	Thrust with rotation of Spin 720° and over	Two legs only: Combined Spin 720° Reversed Combined Spin 360° Twist 1080° Unbalanced 360° Twist Reversed Twist 360°			
Level 8	Thrust with flexibility followed by rotation of Spin 720° and over	Two legs only: Combined Spin 1080° Reversed Combined Spin 720° Twist 1440° Unbalanced 720° Twist Reversed Twist 720°			
Level 9	Thrust continued by catching a sustained Vertical Position	Two legs only: Combined Spin 1440° Reversed Combined Spin 1080° Unbalanced 1080° Twist			



TRANSITIONS

All movements performed outside of hybrids and acrobatics.

Transitions difficulty COMPONENTS are grouped in the following “families”:

1. BALLET LEGS (BL)
2. BOOST (B)
3. EGGBEATER (E)
4. FLEXIBILITY (Fx)
5. BREATHING CONNECTIONS (BC)
6. SURFACE PATTERN CHANGE (SPC)

Any other movements not considered in these families will be judged by the Artistic Impression panel under Choreography.

GENERAL PRINCIPLES

- a) When a **movement** (other than Boost, Breathing Connection, or Surface Pattern Change), is repeated during a transition sequence (a segment from one hybrid/acrobatic to another hybrid/acrobatic), it will be counted a maximum of two times always taking the highest values. For example: if there are three different Eggbeater 3 sec with travelling performed; 2 from Level 2 and 1 of Level 4, the value declared should be 1 x Level 2 + 1 x Level 4.
- b) Each Boost (B), Breathing Connection (BC) or Surface Pattern Change (SPC) movement adds its value regardless of the number of repetitions.
- c) In **teams**: when the movement is not performed by all team members its value will be factored by *0.5 (in the case of half of swimmers included). This principle also applies in pair actions where just one swimmer is performing an action while the other performs a hybrid accompaniment. If the number of the swimmers performing the action is less than half of the team, that action won't be counted.

FAMILIES OF MOVEMENTS

1. BALLET LEGS “BL”

This group includes various combinations of ballet leg, flamingo positions, double ballet legs, etc. Also angled version of this movements are included.

At all levels Ballet Legs can be performed either in a static position or involving as many movements in that position or variants as wished.

a) Level 1

- Bent Knee Back Layout
- Single Ballet Leg or Flamingo less than 3”



b) Level 2

Single Ballet leg or Flamingo 3" and more

c) Level 3

Ballet Leg Sequence 3" or more (combination of changing 3 different positions)
Flamingo and variants with rotation – sustained, ascending or descending

d) Level 4

Double Ballet Leg 3" and more

e) Level 5

Double Ballet Leg rotation 180° - sustained, ascending or descending

f) Level 6

Double Ballet Leg rotation 360° or more – sustained, ascending or descending

2. BOOSTS "B"

This group includes variations of boosts, always executed at maximum height. When using arms, the movement of the arm/s need to reach the shoulder line or above.

a) Level 1

Boost without arms

b) Level 2

Boost with one arm

c) Level 3

Boost with two arms
Assisted Boost (duet, team)

d) Level 4

Boost without arms, rotation 180°

e) Level 5

Boost with one arm, rotation 180°

f) Level 6

Boost with two arms, rotation 180°

g) Level 7

Boost without arms, rotation 360°

h) Level 8

Boost with one arm, rotation 360°

i) Level 9

Boost with two arms, rotation 360°



3. EGGBEATER “E”

This group includes various options for eggbeater kick.

a) Level 1

Eggbeater without arms 3” or more with traveling
Eggbeater with one or two arms less than 3”

b) Level 2

Eggbeater sustaining one arm 3” or more with traveling
Eggbeater with one arm, rotation 180° and more

c) Level 3

Eggbeater sustaining two arms 3” or more with traveling

d) Level 4

Eggbeater with two arms, rotation 180°

e) Level 5

Eggbeater with two arms, rotation 360° and more

4. FLEXIBILITY “Fx”

This group includes various movements that demonstrate flexibility on the surface.

a) Level 1

Showing shoulders flexibility abilities

b) Level 2

Split above the water

c) Level 3

From a Front Layout Position lifting a straight leg while maintaining a horizontal position of the body.

d) Level 4

Ring above the water (when the leg is touching the head drawing a ring).

5. BREATHING CONNECTIONS

When swimmers join or link together above the surface, they create a “breathing connection” action.

The swimmers must be touching in some manner during the performance of the “breathing connection” action.



The is awarded once per connection and it does not matter how many times the positions are changed.

a) Level 1

Connection with one arm, head above the water

b) Level 2

Connection with two arms, head above the water

c) Level 3

Connection one arm-one leg, head above the water

d) Level 4

Connection one arm-two legs, head above the water

e) Level 5

Connection two arms-two legs, head above the water

f) Level 6

Connection with one leg, head above the water

g) Level 7

Connection with two legs, head above the water

h) Level 8

Leg connections with rotation, head above the water

6. SURFACE PATTERN CHANGES

This group includes the pattern changes performed on the surface during the execution of transitions in the routine. The higher the amount of surface pattern changes in the routine, the higher the level. No credit will be given for underwater pattern changes.

a) Level 1

Total amount of surface pattern changes in the routine is **1-5**

b) Level 2

Total amount of surface pattern changes in the routine is **6-10**

c) Level 3

Total amount of surface pattern changes in the routine is **11-15**

d) Level 4



Total amount of surface pattern changes in the routine is **16-20**

e) Level 5

Total amount of surface pattern changes in the routine is **21 and more**



TRANSITIONS DIFFICULTY TABLE:

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Levels	Ballet Legs (BL)	Boosts (B)	Eggbeater (E)	Flexibility (Fx)	Breathing Connection (BC)	Surface Pattern Change (SPC)	
Level 1 (basic)	Bent Knee Back Layout Single Ballet Leg or Flamingo less than 3"	Boost without arms	Eggbeater without arms 3" with traveling; Eggbeater with one or two arms less than 3"	Showing shoulder flexibility abilities	Connection with one arm, head above the water	Amount per routine 1-5	
Level 2	Single Ballet Leg or Flamingo 3" or more	Boost with one arm	Eggbeater sustaining one arm 3" with traveling; Eggbeater with one arm, rotation 180° and more	Split above the water	Connection with two arms, head above the water	Amount per routine 6-10	
Level 3	Ballet Leg sequence 3" or more Flamingo and variants with rotation	Boost with two arms Assisted Boost (duet, team)	Eggbeater sustaining double arms 3" with traveling	From Front Layout Position lifting straight leg while maintaining a horizontal position of the body	Connection one arm-one leg, head above the water	Amount per routine 11-15	
Level 4	Double Ballet Leg 3" and more	Boost without arms, rotation 180°	Eggbeater with two arms rotation 180°	Ring above the water	Connection one arm-two legs, head above the water	Amount per routine 16-20	
Level 5	Double Ballet Leg rotation 180°	Boost with one arm, rotation 180°	Eggbeater with two arms rotation 360° and more		Connection two arms-two legs, head above the water	Amount per routine 21 and more	
Level 6	Double Ballet Leg rotation 360°	Boost with two arms, rotation 180°			Connection with one leg, head above the water		
Level 7		Boost without arms, rotation 360°			Connection with two legs, head above the water		
Level 8		Boost with one arm, rotation 360°			Leg connections with rotation, head above the water		
Level 9		Boost with two arms, rotation 360°					



HOW DO ALL OF THESE HYBRID COMPONENTS GO INTO A DECLARED DIFFICULTY CARD?

Now that we have introduced and explained the Hybrid Difficulty Table and Transitions Difficulty Table, we can provide an example of the Difficulty Calculator and Coach Card.

IMPORTANT: If the coach has declared a movement or bonus on the Coach Card and the athlete does not perform it, then the value of the unexecuted movement or bonus is deducted.

EXAMPLE OF FILLING OUT THE DIFFICULTY CALCULATOR:

Below is an example of the Difficulty Calculator template in Excel (currently only for hybrids, Transitions calculator is in development).

User can enter Elements and Bonuses to calculate total result for the hybrid (Result box).

Please note as per introduction, score value is being tested/verified and is subject to change.

Elements				Bonuses			Result:
Nº	Family	Level	Score	Type	Bonus	Score	
1	Thrusts (T)	4	0.45	Placement	Hybrid in last 20"	0.2	3.92
2	Rotations (R)	6	0.70	Synchronization	Full hybrid synchronized	0.5	
3	Flexibility (F)	4	0.25				
4	Rotations (R)	1	0.30				
5	Connections (C)	5	0.40				



EXAMPLE OF COACH CARD FOR COMPLETION BY COACH:

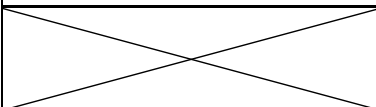
Please note as per introduction, difficulty values are being tested/verified and are subject to change. Below is an example of the Coach Card template in Excel.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	COACH CARD															
2	Participant						Cyprus									
3	Country						Cyprus									
4	Event						Team									
5	Start number						1									
6	Timing	Routine Part	Base Mark		Families										difficulty	
7	Start Time	HYBRID	0.15		R1	T3										0.50
8	0:10.50	Check			yes	yes										0.00
9	—															0.65
10	0:16.25	BONUSES	A													0.05
11	End time	Check	yes													0.00
12																0.05
13														Total		0.70
14	Start Time	TRANSITION			BL4	E6										0.55
15	0:16.25	Check			yes	yes										0.00
16	—															0.55
17	12:25:15 AM	BONUSES														0
18	End time	Check														0.00
19																0.00
20		* Drop-down selection for routine part*													Total	0.55
21	Start Time	ACROBATIC														2.50
22	12:25:15 AM	HYBRID														0.00
23	—	TRANSITION														2.50
24	12:32:09 AM	ACROBATIC														0
25	End time	Check														0.00
26																0.00
27														Total		2.50
28	Start Time	HYBRID	0.25		AW5	R4	F3	T4								1.40
29	12:25:15 AM	Check			yes	no	yes	yes								-0.55
30	—															1.10
31	12:49:23 AM	BONUSES	TR	PL	A											0.70
32	End time	Check	yes	no	yes											-0.15
33																0.55
34														Total		1.65
35	Start Time	TRANSITION			B3	SPC3										1.25
36	12:32:09 AM	Check			yes	yes										0.00
37	—															1.25
38	12:49:23 AM	BONUSES														0.00
39	End time	Check														0.00
40																0.00
41														Total		1.25
42														Routine difficulty		6.65
43																

Note: The number of SPC is indicated on the coach card in the last part of the Transition



COACH CARD LEGEND:

COACH CARD - LEGEND				
Base Mark				
		Time underwater (TU)		
		(S) 0.05	(M) 0.1	(L) 0.2
Number of movements (NM)	(≤6) 0.05	0.10	0.15	0.25
	(7-19) 0.1	0.15	0.20	0.30
	(20-29) 0.2	0.25	0.30	0.40
	(≥30) 0.3	0.35	0.40	0.50
Families (groups)		Families (group) + Level		
Thrusts	T	T1 - T9		
Rotations	R	R1 - R9		
Flexibility	F	F1 - F6		
Airborne Weight	AW	AW1 - AW6		
Connections	C	C1 - C6		
Bonuses		Bonus		
Traveling	TR	TR		
Angles	A	A-S or A-C		
Placement	PL	PL		
Synchronisation	SY	SY-P or SY-F		
Pattern Change	PC	PC-S or PC-C		

Families (groups)		Families (group) + Level	
Ballet Legs	BL	BL1 - BL6	
Boosts	B	B1 - B9	
Eggbeater	E	E1 - E5	
Flexibility	Fx	Fx1 - Fx4	
Breathing Connection	BC	BC1 - BC8	
Surface Pattern Change	SPC	SPC1 - SPC5	