

# Scoring System

# Validation Data

Masters

FISAC-IRSF Rules 2017-2018

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## Preface

While developing RopeScore I stumbled into one major problem: There were no test data to find.

In other words, there was no way to check that the scoring system was calculating correctly. As all raw data from competitions were destroyed a few weeks after the competitions, and for those competitions where the results were saved the results were often based on old rules, and lacked the interesting edge cases. On top of that, scoring systems all over the place had minor variations in their interpretations of the rules that made it impossible to compare the systems against each other.

Directly after the release of the 2018 rules i grabbed pen and paper and started writing down all edge cases i could think of. When the list had grew a bit i started carefully crafting raw scores to cover all those edge cases, as well as a normal case where nothing special happens.

The goals are simple: Cover as many edge cases as possible; Write the data in a way so that they can be punched into any scoring system that are compliant with the FISAC-IRSF rulebook and it will return the same final scores and ranks as the following test data.

Each freestyle covers one or more edge case, but only one per subscore. For example, you won't see a participant where multiple edge cases for difficulty are gathered under the same participant.

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The Scoring System Validation Data is hand-crafted in Sweden, all scores and ranks are calculated by hand, once twice and trice, it's then compared against RopeScore, then recalculated once more.

The source of this document can be found and downloaded from <https://ropescore.com/testdata>. If you want to report errors in the data or suggest additional edge cases, please email [testdata@ropescore.com](mailto:testdata@ropescore.com)

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## A Single Rope Speed Sprint

$$n = 5 \quad (1)$$

$$T = \frac{S_x + S_y}{2} \quad (2)$$

The two closest scores are averaged.

$$W = 5F_{Start} \quad (3)$$

$$Y = n(T - W) \quad (4)$$

### A – M001 All Same

$S_1$	80
$S_2$	80
$S_3$	80
False Start	0

$$T = \frac{80 + 80}{2} \quad (5)$$

$$T = 80 \quad (6)$$

$$W = 5 * 0 \quad (7)$$

$$W = 0 \quad (8)$$

$$Y = 5(80 - 0) \quad (9)$$

$$Y = 400 \quad (10)$$

T 80	W 0	Y 400
---------	--------	----------

**A – M002 One High**

$S_1$	80
$S_2$	80
$S_3$	85
False Start	0

$$T = \frac{80 + 80}{2} \quad (11)$$

$$T = 80 \quad (12)$$

$$W = 5 * 0 \quad (13)$$

$$W = 0 \quad (14)$$

$$Y = 5(80 - 0) \quad (15)$$

$$Y = 400 \quad (16)$$

T 80	W 0	Y 400
---------	--------	----------

**A – M003 One Low**

$S_1$	80
$S_2$	80
$S_3$	75
False Start	0

$$T = \frac{80 + 80}{2} \quad (17)$$

$$T = 80 \quad (18)$$

$$W = 5 * 0 \quad (19)$$

$$W = 0 \quad (20)$$

$$Y = 5(80 - 0) \quad (21)$$

$$Y = 400 \quad (22)$$

T 80	W 0	Y 400
---------	--------	----------

**A – M004 Equally Spaced**

$S_1$	75
$S_2$	80
$S_3$	85
False Start	0

$$T = \frac{80 + 85}{2} \quad (23)$$

$$T = 82.5 \quad (24)$$

$$W = 5 * 0 \quad (25)$$

$$W = 0 \quad (26)$$

$$Y = 5(82.5 - 0) \quad (27)$$

$$Y = 412.5 \quad (28)$$

Reskip Allowed

T 82.5	W 0	Y 412.5
-----------	--------	------------



**A – M005 One Higher Closest**

$S_1$	70
$S_2$	80
$S_3$	85
False Start	0

$$T = \frac{80 + 85}{2} \quad (29)$$

$$T = 82.5 \quad (30)$$

$$W = 5 * 0 \quad (31)$$

$$W = 0 \quad (32)$$

$$Y = 5(82.5 - 0) \quad (33)$$

$$Y = 412.5 \quad (34)$$

Reskip Allowed

T 82.5	W 0	Y 412.5
-----------	--------	------------

**A – M006 One Lower Closest**

$S_1$	75
$S_2$	80
$S_3$	90
False Start	0

$$T = \frac{75 + 80}{2} \tag{35}$$

$$T = 77.5 \tag{36}$$

$$W = 5 * 0 \tag{37}$$

$$W = 0 \tag{38}$$

$$Y = 5 (77.5 - 0) \tag{39}$$

$$Y = 387.5 \tag{40}$$

Reskip Allowed

T 77.5	W 0	Y 387.5
-----------	--------	------------

**A – M007 False Start**

$S_1$	80
$S_2$	80
$S_3$	80
False Start	1

$$T = \frac{80 + 80}{2} \quad (41)$$

$$T = 80 \quad (42)$$

$$W = 5 * 1 \quad (43)$$

$$W = 5 \quad (44)$$

$$Y = 5(80 - 5) \quad (45)$$

$$Y = 375 \quad (46)$$

T 80	W 5	Y 375
---------	--------	----------

**A – M008 Blank**

$S_1$	0
$S_2$	0
$S_3$	0
False Start	0

$$T = \frac{0 + 0}{2} \quad (47)$$

$$T = 0 \quad (48)$$

$$W = 5 * 0 \quad (49)$$

$$W = 0 \quad (50)$$

$$Y = 5(0 - 0) \quad (51)$$

$$Y = 0 \quad (52)$$

T 0	W 0	Y 0
--------	--------	--------

**A – M009 Zero**

$S_1$	5
$S_2$	5
$S_3$	5
False Start	1

$$T = \frac{5 + 5}{2} \quad (53)$$

$$T = 5 \quad (54)$$

$$W = 5 * 1 \quad (55)$$

$$W = 5 \quad (56)$$

$$Y = 5(5 - 5) \quad (57)$$

$$Y = 0 \quad (58)$$

T 5	W 5	Y 0
--------	--------	--------

**A – M010 Negative**

$S_1$	2
$S_2$	2
$S_3$	2
False Start	1

$$T = \frac{2 + 2}{2} \quad (59)$$

$$T = 2 \quad (60)$$

$$W = 5 * 1 \quad (61)$$

$$W = 5 \quad (62)$$

$$Y = 5(2 - 5) \quad (63)$$

$$Y = -15 \quad (64)$$

T 2	W 5	Y -15
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**A – M011 scores separated by 4**

$S_1$	76
$S_2$	80
$S_3$	84
False Start	0

$$T = \frac{80 + 84}{2} \quad (65)$$

$$T = 82 \quad (66)$$

$$W = 5 * 0 \quad (67)$$

$$W = 0 \quad (68)$$

$$Y = 5(82 - 0) \quad (69)$$

$$Y = 410 \quad (70)$$

Reskip Allowed

T 82	W 0	Y 410
---------	--------	----------

**A – M012 scores separated by 3**

$S_1$	77
$S_2$	80
$S_3$	83
False Start	0

$$T = \frac{80 + 83}{2} \quad (71)$$

$$T = 81.5 \quad (72)$$

$$W = 5 * 0 \quad (73)$$

$$W = 0 \quad (74)$$

$$Y = 5(81.5 - 0) \quad (75)$$

$$Y = 407.5 \quad (76)$$

T 81.5	W 0	Y 407.5
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**Event Ranks**

<b>Participant</b>	<b>Score</b>	<b>Rank</b>
M001	400	5
M002	400	5
M003	400	5
M004	412.5	1
M005	412.5	1
M006	387.5	8
M007	375	9
M008	0	10
M009	0	10
M010	-15	12
M011	410	3
M012	407.5	4

## B Single Rope Speed Endurance

$$T = \frac{S_x + S_y}{2} \quad (77)$$

The two closest scores are averaged.

$$W = 5F_{Start} \quad (78)$$

$$Y = T - W \quad (79)$$

### B – M001 All Same

$S_1$	450
$S_2$	450
$S_3$	450
False Start	0

$$T = \frac{450 + 450}{2} \quad (80)$$

$$T = 450 \quad (81)$$

$$W = 5 * 0 \quad (82)$$

$$W = 0 \quad (83)$$

$$Y = 450 - 0 \quad (84)$$

$$Y = 450 \quad (85)$$

T 450	W 0	Y 450
----------	--------	----------

**B – M002 One High**

$S_1$	450
$S_2$	450
$S_3$	455
False Start	0

$$T = \frac{450 + 450}{2} \quad (86)$$

$$T = 450 \quad (87)$$

$$W = 5 * 0 \quad (88)$$

$$W = 0 \quad (89)$$

$$Y = 450 - 0 \quad (90)$$

$$Y = 450 \quad (91)$$

T 450	W 450	Y 450
----------	----------	----------

**B – M003 One Low**

$S_1$	450
$S_2$	450
$S_3$	445
False Start	0

$$T = \frac{450 + 450}{2} \quad (92)$$

$$T = 450 \quad (93)$$

$$W = 5 * 0 \quad (94)$$

$$W = 0 \quad (95)$$

$$Y = 450 - 0 \quad (96)$$

$$Y = 450 \quad (97)$$

T 450	W 0	Y 450
----------	--------	----------

**B – M004 Equally Spaced**

$S_1$	445
$S_2$	450
$S_3$	455
False Start	0

$$T = \frac{450 + 455}{2} \quad (98)$$

$$T = 452.5 \quad (99)$$

$$W = 5 * 0 \quad (100)$$

$$W = 0 \quad (101)$$

$$Y = 453.5 - 0 \quad (102)$$

$$Y = 452.5 \quad (103)$$

Reskip Allowed

T 452.5	W 0	Y 452.5
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**B – M005 One Higher Closest**

$S_1$	440
$S_2$	450
$S_3$	455
False Start	0

$$T = \frac{450 + 455}{2} \quad (104)$$

$$T = 452.5 \quad (105)$$

$$W = 5 * 0 \quad (106)$$

$$W = 0 \quad (107)$$

$$Y = 452.5 - 0 \quad (108)$$

$$Y = 452.5 \quad (109)$$

Reskip Allowed

T 452.5	W 0	Y 452.5
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**B – M006 One Lower Closest**

$S_1$	445
$S_2$	450
$S_3$	460
False Start	0

$$T = \frac{445 + 450}{2} \quad (110)$$

$$T = 447.5 \quad (111)$$

$$W = 5 * 0 \quad (112)$$

$$W = 0 \quad (113)$$

$$Y = 447.5 - 0 \quad (114)$$

$$Y = 447.5 \quad (115)$$

Reskip Allowed

T 447.5	W 0	Y 447.5
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**B – M007 False Start**

$S_1$	450
$S_2$	450
$S_3$	450
False Start	1

$$T = \frac{450 + 450}{2} \quad (116)$$

$$T = 45 \quad (117)$$

$$W = 5 * 1 \quad (118)$$

$$W = 5 \quad (119)$$

$$Y = 450 - 5 \quad (120)$$

$$Y = 445 \quad (121)$$

T 450	W 5	Y 445
----------	--------	----------



**B – M008 Blank**

$S_1$	0
$S_2$	0
$S_3$	0
False Start	0

$$T = \frac{0 + 0}{2} \quad (122)$$

$$T = 0 \quad (123)$$

$$W = 5 * 0 \quad (124)$$

$$W = 0 \quad (125)$$

$$Y = 0 - 0 \quad (126)$$

$$Y = 0 \quad (127)$$

T 0	W 0	Y 0
--------	--------	--------

**B – M009 Zero**

$S_1$	5
$S_2$	5
$S_3$	5
False Start	1

$$T = \frac{5 + 5}{2} \quad (128)$$

$$T = 5 \quad (129)$$

$$W = 5 * 1 \quad (130)$$

$$W = 5 \quad (131)$$

$$Y = 5 - 5 \quad (132)$$

$$Y = 0 \quad (133)$$

T 5	W 5	Y 0
--------	--------	--------

**B – M010 Negative**

$S_1$	2
$S_2$	2
$S_3$	2
False Start	1

$$T = \frac{2 + 2}{2} \quad (134)$$

$$T = 2 \quad (135)$$

$$W = 5 * 1 \quad (136)$$

$$W = 5 \quad (137)$$

$$Y = 2 - 5 \quad (138)$$

$$Y = -3 \quad (139)$$

T 2	W 5	Y -3
--------	--------	---------

**B – M011 scores separated by 4**

$S_1$	446
$S_2$	450
$S_3$	454
False Start	0

$$T = \frac{450 + 454}{2} \quad (140)$$

$$T = 452 \quad (141)$$

$$W = 5 * 0 \quad (142)$$

$$W = 0 \quad (143)$$

$$Y = 452 - 0 \quad (144)$$

$$Y = 452 \quad (145)$$

Reskip Allowed

T 452	W 0	Y 452
----------	--------	----------

**B – M012 scores separated by 3**

$S_1$	447
$S_2$	450
$S_3$	453
False Start	0

$$T = \frac{450 + 453}{2} \quad (146)$$

$$T = 451.5 \quad (147)$$

$$W = 5 * 0 \quad (148)$$

$$W = 0 \quad (149)$$

$$Y = 451.5 - 0 \quad (150)$$

$$Y = 451.5 \quad (151)$$

T 451.5	W 0	Y 451.5
------------	--------	------------

**Event Ranks**

<b>Participant</b>	<b>Score</b>	<b>Rank</b>
M001	450	5
M002	450	5
M003	450	5
M004	452.5	1
M005	452.5	1
M006	447.5	8
M007	445	9
M008	0	10
M009	0	10
M010	-3	12
M011	452	3
M012	451.5	4

## C Single Rope Single Freestyle

$$\text{round}(x) = \frac{\lceil 10000x \rceil}{10000} \quad (152)$$

### Presentation

The following abbreviations will be used

MoB	Music On Beat
UoM	Use of Music
Mov	Movement
FBE	Form of Body and Execution
Ori	Originality
OIm	Overall Impression

$$S_{A_x} = 0.5(A_{x_{MoB}} + A_{x_{UoM}}) + 0.5A_{x_{Mov}} + A_{x_{FBE}} + A_{x_{Ori}} + 0.5A_{x_{OIm}} \quad (153)$$

$$T_2 = \text{round}\left(5 \frac{S_{A_a} + S_{A_b} + S_{A_c}}{3}\right) \quad (154)$$

Where the highest and lowest of the five presentation scores ( $S_{A_x}$ ) are dropped before averaging the remaining three.

### Required Elements

The following abbreviations will be used

Mu	Multiple sets
Gy	Gymnastics
Po	Power
Sp	Speed Dances
Re	Releases
Wr	Wraps

$$S_{B_x} = B_{x_{Mu}} + B_{x_{Gy}} + B_{x_{Po}} + B_{x_{Sp}} + B_{x_{Re}} + B_{x_{Wr}} \quad (155)$$

$$(S_{B_x} > 14 \rightarrow S_{B_x} = 14) \quad (156)$$

$$T_3 = \text{round}\left(\frac{50}{14} \times \frac{S_{B_1} + S_{B_2} + S_{B_3}}{3}\right) \quad (157)$$

$$(T_3 > 50 \rightarrow T_3 = 50) \quad (158)$$

**Difficulty**

$$l(x) = \frac{3}{1.5^{6-x}} \quad (159)$$

$$S_{D_{xL_y}} = D_{xL_y} \times l(y) \quad (160)$$

$$(S_{D_{xL4}} > 30 \rightarrow S_{D_{xL3}} = S_{D_{xL3}} + (S_{D_{xL4}} - 30)) \quad (161)$$

$$(S_{D_{xL4}} > 30 \rightarrow S_{D_{xL4}} = 30) \quad (162)$$

$$(S_{D_{xL3}} > 20 \rightarrow S_{D_{xL2}} = S_{D_{xL2}} + (S_{D_{xL3}} - 20) \& S_{D_{xL3}} = 20) \quad (163)$$

$$(S_{D_{xL3}} > 20 \rightarrow S_{D_{xL3}} = 20) \quad (164)$$

$$(S_{D_{xL2}} > 10 \rightarrow S_{D_{xL2}} = 10) \quad (165)$$

$$S_{D_x} = S_{D_{xL2}} + S_{D_{xL3}} + S_{D_{xL4}} + S_{D_{xL5}} + S_{D_{xL6}} \quad (166)$$

$$T_1 = \text{round} \left( 2.5 \frac{S_{D_a} + S_{D_b} + S_{D_c}}{3} \right) \quad (167)$$

Where the highest and lowest of the five difficulty scores ( $S_{D_x}$ ) are dropped before averaging the remaining three.

**Creativity**

$$T_4 = \text{round} (T_3 + T_2) \quad (168)$$

**Misses**

$$M_{HJ} = 12.5HJ_{Minor} + 25HJ_{Major} \quad (169)$$

$$M_{A_x} = 12.5A_{xMinor} + 25A_{xMajor} \quad (170)$$

$$M_{B_x} = 12.5B_{xMinor} + 25B_{xMajor} \quad (171)$$

$$T_5 = \text{round} \left( \frac{M_a + M_b + M_c + M_d + M_e + M_f + M_g}{7} + 12.5HJ_{Space} + 25HJ_{Time} \right) \quad (172)$$

Where the highest and lowest of the nine difficulty scores ( $M_x$ ) are dropped before averaging the remaining seven.

**Final**

$$R_{Diff} = \text{round} \left( T_1 - \frac{T_5}{2} \right) \quad (173)$$

$$R_{Crea} = \text{round} \left( T_4 - \frac{T_5}{2} \right) \quad (174)$$

$$R = \text{round} (2(T_1 + T_4 - T_5)) \quad (175)$$



**C – M001 Nothing Special****Presentation ( $T_2$ )**

	MoB	UoM	Mov	FBE	ORI	OIM
$A_1$	5	5	5	5	5	5
$A_2$	5	5	5	5	5	5
$A_3$	5	5	5	5	5	5
$A_4$	5	5	5	5	5	5
$A_5$	5	5	5	5	5	5

$$S_{A_1} = 20 \quad (176)$$

$$S_{A_2} = 20 \quad (177)$$

$$S_{A_3} = 20 \quad (178)$$

$$S_{A_4} = 20 \quad (179)$$

$$S_{A_5} = 20 \quad (180)$$

$$T_2 = 5 \frac{20 + 20 + 20}{3} \quad (181)$$

$$T_2 = 100 \quad (182)$$

**Required Elements ( $T_3$ )**

	MU	GY	PO	SP	RE	WR
$B_1$	2	2	2	2	2	2
$B_2$	2	2	2	2	2	2
$B_3$	2	2	2	2	2	2

$$S_{B_1} = 12 \quad (183)$$

$$S_{B_2} = 12 \quad (184)$$

$$S_{B_3} = 12 \quad (185)$$

$$T_3 = \frac{50}{14} \times \frac{12 + 12 + 12}{3} \quad (186)$$

$$T_3 = 42.8571 \quad (187)$$

**Difficulty ( $T_1$ )**

	L2	L3	L4	L5	L6
$D_1$	10	10	10	10	10
$D_2$	10	10	10	10	10
$D_3$	10	10	10	10	10
$D_4$	10	10	10	10	10
$D_5$	10	10	10	10	10

$$S_{D_1} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (188)$$

$$S_{D_2} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (189)$$

$$S_{D_3} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (190)$$

$$S_{D_4} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (191)$$

$$S_{D_5} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (192)$$

$$T_1 = 2.5 \frac{78.1481 + 78.1481 + 78.1481}{3} \quad (193)$$

$$T_1 = 195.3703 \quad (194)$$

**Misses ( $T_5$ )**

	MINOR	MAJOR	TIME	SPACE
<i>HJ</i>	1	1	1	1
<i>A</i> <sub>1</sub>	1	1		
<i>A</i> <sub>2</sub>	1	1		
<i>A</i> <sub>3</sub>	1	1		
<i>A</i> <sub>4</sub>	1	1		
<i>A</i> <sub>5</sub>	1	1		
<i>B</i> <sub>1</sub>	1	1		
<i>B</i> <sub>2</sub>	1	1		
<i>B</i> <sub>3</sub>	1	1		

$$M_{HJ} = 37.5 \quad (195)$$

$$M_{A_1} = 37.5 \quad (196)$$

$$M_{A_2} = 37.5 \quad (197)$$

$$M_{A_3} = 37.5 \quad (198)$$

$$M_{A_4} = 37.5 \quad (199)$$

$$M_{A_5} = 37.5 \quad (200)$$

$$M_{B_1} = 37.5 \quad (201)$$

$$M_{B_2} = 37.5 \quad (202)$$

$$M_{B_3} = 37.5 \quad (203)$$

$$T_5 = \frac{37.5 + 37.5 + 37.5 + 37.5 + 37.5 + 37.5 + 37.5}{7} + 12.5 + 25 \quad (204)$$

$$T_5 = 75 \quad (205)$$

$T_1$ 195.3703	$T_2$ 100	$T_3$ 42.8571	$T_4$ 142.8571	$T_5$ 75
$R_{Diff}$ 157.8703		$R_{Crea}$ 105.3571		$R$ 526.4548

**C – M002 L3 cap, only minor misses****Presentation ( $T_2$ )**

	MoB	UoM	Mov	FBE	ORI	OIM
$A_1$	10	10	10	10	10	10
$A_2$	5	5	5	5	5	5
$A_3$	5	5	5	5	5	5
$A_4$	5	5	5	5	5	5
$A_5$	0	0	0	0	0	0

$$S_{A_1} = 40 \quad (206)$$

$$S_{A_2} = 20 \quad (207)$$

$$S_{A_3} = 20 \quad (208)$$

$$S_{A_4} = 20 \quad (209)$$

$$S_{A_5} = 0 \quad (210)$$

$$T_2 = 5 \frac{20 + 20 + 20}{3} \quad (211)$$

$$T_2 = 100 \quad (212)$$

**Required Elements ( $T_3$ )**

	MU	GY	PO	SP	RE	WR
$B_1$	1	1	1	1	1	1
$B_2$	2	2	2	2	2	2
$B_3$	2	2	2	2	2	2

$$S_{B_1} = 6 \quad (213)$$

$$S_{B_2} = 12 \quad (214)$$

$$S_{B_3} = 12 \quad (215)$$

$$T_3 = \frac{50}{14} \times \frac{6 + 12 + 12}{3} \quad (216)$$

$$T_3 = 35.7143 \quad (217)$$

**Difficulty ( $T_1$ )**

	L2	L3	L4	L5	L6
$D_1$	10	10	10	10	10
$D_2$	10	25	10	10	10
$D_3$	10	25	10	10	10
$D_4$	10	25	10	10	10
$D_5$	10	10	10	10	10

$$S_{D_1} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (218)$$

$$S_{D_2} = \left\{ \begin{array}{l} L2 = 8.1481 \\ L3 = 20 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 90.4814 \quad (219)$$

$$S_{D_3} = \left\{ \begin{array}{l} L2 = 8.1481 \\ L3 = 20 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 90.48141 \quad (220)$$

$$S_{D_4} = \left\{ \begin{array}{l} L2 = 8.1481 \\ L3 = 20 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 90.4814 \quad (221)$$

$$S_{D_5} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (222)$$

$$T_1 = 2.5 \frac{78.1481 + 90.4814 + 90.4814}{3} \quad (223)$$

$$T_1 = 217.5924 \quad (224)$$

### Misses ( $T_5$ )

	MINOR	MAJOR	TIME	SPACE
<i>HJ</i>	4	0	0	0
<i>A</i> <sub>1</sub>	3	0		
<i>A</i> <sub>2</sub>	2	0		
<i>A</i> <sub>3</sub>	1	0		
<i>A</i> <sub>4</sub>	1	0		
<i>A</i> <sub>5</sub>	1	0		
<i>B</i> <sub>1</sub>	1	0		
<i>B</i> <sub>2</sub>	1	0		
<i>B</i> <sub>3</sub>	1	0		

$$M_{HJ} = 50 \quad (225)$$

$$M_{A_1} = 37.5 \quad (226)$$

$$M_{A_2} = 25 \quad (227)$$

$$M_{A_3} = 12.5 \quad (228)$$

$$M_{A_4} = 12.5 \quad (229)$$

$$M_{A_5} = 12.5 \quad (230)$$

$$M_{B_1} = 12.5 \quad (231)$$

$$M_{B_2} = 12.5 \quad (232)$$

$$M_{B_3} = 12.5 \quad (233)$$

$$T_5 = \frac{37.5 + 25 + 12.5 + 12.5 + 12.5 + 12.5 + 12.5}{7} + 0 + 0 \quad (234)$$

$$T_5 = 17.8571 \quad (235)$$

$T_1$ 217.5924	$T_2$ 100	$T_3$ 35.7143	$T_4$ 135.7143	$T_5$ 17.8571
$R_{Diff}$ 208.6639		$R_{Crea}$ 126.8128		$R$ 670.9532

**C – M003 L3 cap capping L2, only major misses****Presentation ( $T_2$ )**

	MoB	UoM	Mov	FBE	ORI	OIM
$A_1$	10	10	10	10	10	10
$A_2$	7.5	7.5	7.5	7.5	7.5	7.5
$A_3$	5	5	5	5	5	5
$A_4$	5	5	5	5	5	5
$A_5$	0	0	0	0	0	0

$$S_{A_1} = 40 \quad (236)$$

$$S_{A_2} = 30 \quad (237)$$

$$S_{A_3} = 20 \quad (238)$$

$$S_{A_4} = 20 \quad (239)$$

$$S_{A_5} = 0 \quad (240)$$

$$T_2 = 5 \frac{30 + 20 + 20}{3} \quad (241)$$

$$T_2 = 116.6667 \quad (242)$$

**Required Elements ( $T_3$ )**

	MU	GY	PO	SP	RE	WR
$B_1$	1	1	1	1	1	1
$B_2$	1	1	1	1	1	1
$B_3$	2	2	2	1	1	1

$$S_{B_1} = 6 \quad (243)$$

$$S_{B_2} = 6 \quad (244)$$

$$S_{B_3} = 9 \quad (245)$$

$$T_3 = \frac{50}{14} \times \frac{6 + 6 + 9}{3} \quad (246)$$

$$T_3 = 25 \quad (247)$$

**Difficulty ( $T_1$ )**

	L2	L3	L4	L5	L6
$D_1$	10	10	10	10	10
$D_2$	15	25	10	10	10
$D_3$	15	25	10	10	10
$D_4$	15	25	10	10	10
$D_5$	10	10	10	10	10

$$S_{D_1} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (248)$$

$$S_{D_2} = \left\{ \begin{array}{l} L2 = 10 \\ L3 = 20 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 93.3333 \quad (249)$$

$$S_{D_3} = \left\{ \begin{array}{l} L2 = 10 \\ L3 = 20 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 93.3333 \quad (250)$$

$$S_{D_4} = \left\{ \begin{array}{l} L2 = 10 \\ L3 = 20 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 93.3333 \quad (251)$$

$$S_{D_5} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (252)$$

$$T_1 = 2.5 \frac{78.1481 + 93.3333 + 93.3333}{3} \quad (253)$$

$$T_1 = 220.6789 \quad (254)$$

**Misses ( $T_5$ )**

	MINOR	MAJOR	TIME	SPACE
<i>HJ</i>	0	4	0	0
<i>A</i> <sub>1</sub>	0	3		
<i>A</i> <sub>2</sub>	0	2		
<i>A</i> <sub>3</sub>	0	1		
<i>A</i> <sub>4</sub>	0	1		
<i>A</i> <sub>5</sub>	0	1		
<i>B</i> <sub>1</sub>	0	1		
<i>B</i> <sub>2</sub>	0	1		
<i>B</i> <sub>3</sub>	0	0		



$$M_{HJ} = 100 \quad (255)$$

$$M_{A_1} = 75 \quad (256)$$

$$M_{A_2} = 50 \quad (257)$$

$$M_{A_3} = 25 \quad (258)$$

$$M_{A_4} = 25 \quad (259)$$

$$M_{A_5} = 25 \quad (260)$$

$$M_{B_1} = 25 \quad (261)$$

$$M_{B_2} = 25 \quad (262)$$

$$M_{B_3} = 25 \quad (263)$$

$$T_5 = \frac{75 + 50 + 25 + 25 + 25 + 25 + 25}{7} + 0 + 0 \quad (264)$$

$$T_5 = 35.7143 \quad (265)$$

$T_1$ 220.6789	$T_2$ 116.6667	$T_3$ 25	$T_4$ 141.6667	$T_5$ 35.7143
$R_{Diff}$ 202.8218		$R_{Crea}$ 123.8096		$R$ 653.2626

**C – M004 L3 cap to capped L2, only Time miss****Presentation ( $T_2$ )**

	MoB	UoM	Mov	FBE	ORI	OIM
$A_1$	10	10	10	10	10	10
$A_2$	7.5	7.5	7.5	7.5	7.5	7.5
$A_3$	5	5	5	5	5	5
$A_4$	5	5	5	5	5	5
$A_5$	1	2	3	4	5	6

$$S_{A_1} = 40 \quad (266)$$

$$S_{A_2} = 30 \quad (267)$$

$$S_{A_3} = 20 \quad (268)$$

$$S_{A_4} = 20 \quad (269)$$

$$S_{A_5} = 15.75 \quad (270)$$

$$T_2 = 5 \frac{30 + 20 + 20}{3} \quad (271)$$

$$T_2 = 116.6667 \quad (272)$$

**Required Elements ( $T_3$ )**

	MU	GY	PO	SP	RE	WR
$B_1$	3	2	1	2	3	2
$B_2$	1	2	3	2	1	2
$B_3$	1	1	2	2	3	3

$$S_{B_1} = 13 \quad (273)$$

$$S_{B_2} = 11 \quad (274)$$

$$S_{B_3} = 12 \quad (275)$$

$$T_3 = \frac{50}{14} \times \frac{13 + 11 + 12}{3} \quad (276)$$

$$T_3 = 42.8571 \quad (277)$$

**Difficulty ( $T_1$ )**

	L2	L3	L4	L5	L6
$D_1$	10	10	10	10	10
$D_2$	20	25	10	10	10
$D_3$	20	25	10	10	10
$D_4$	20	25	10	10	10
$D_5$	10	10	10	10	10

$$S_{D_1} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (278)$$

$$S_{D_2} = \left\{ \begin{array}{l} L2 = 10 \\ L3 = 20 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 93.3333 \quad (279)$$

$$S_{D_3} = \left\{ \begin{array}{l} L2 = 10 \\ L3 = 20 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 93.3333 \quad (280)$$

$$S_{D_4} = \left\{ \begin{array}{l} L2 = 10 \\ L3 = 20 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 93.3333 \quad (281)$$

$$S_{D_5} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (282)$$

$$T_1 = 2.5 \frac{78.1481 + 93.3333 + 93.3333}{3} \quad (283)$$

$$T_1 = 220.6789 \quad (284)$$

**Misses ( $T_5$ )**

	MINOR	MAJOR	TIME	SPACE
<i>HJ</i>	0	0	1	0
<i>A</i> <sub>1</sub>	0	0		
<i>A</i> <sub>2</sub>	0	0		
<i>A</i> <sub>3</sub>	0	0		
<i>A</i> <sub>4</sub>	0	0		
<i>A</i> <sub>5</sub>	0	0		
<i>B</i> <sub>1</sub>	0	0		
<i>B</i> <sub>2</sub>	0	0		
<i>B</i> <sub>3</sub>	0	0		

$$M_{HJ} = 0 \quad (285)$$

$$M_{A_1} = 0 \quad (286)$$

$$M_{A_2} = 0 \quad (287)$$

$$M_{A_3} = 0 \quad (288)$$

$$M_{A_4} = 0 \quad (289)$$

$$M_{A_5} = 0 \quad (290)$$

$$M_{B_1} = 0 \quad (291)$$

$$M_{B_2} = 0 \quad (292)$$

$$M_{B_3} = 0 \quad (293)$$

$$T_5 = \frac{0 + 0 + 0 + 0 + 0 + 0 + 0}{7} + 0 + 25 \quad (294)$$

$$T_5 = 25 \quad (295)$$

$T_1$ 220.6789	$T_2$ 116.6667	$T_3$ 42.8571	$T_4$ 159.5238	$T_5$ 25
$R_{Diff}$ 208.1789		$R_{Crea}$ 147.0238		$R$ 710.4054

## C – M005 More than 14 Required Elements, L4 cap, only Space miss

### Presentation ( $T_2$ )

	MoB	UoM	Mov	FBE	ORI	OIM
$A_1$	10	10	10	10	10	10
$A_2$	7.5	7.5	7.5	7.5	7.5	7.5
$A_3$	5	5	5	5	5	5
$A_4$	6	5	4	3	2	1
$A_5$	1	2	3	4	5	6

$$S_{A_1} = 40 \quad (296)$$

$$S_{A_2} = 30 \quad (297)$$

$$S_{A_3} = 20 \quad (298)$$

$$S_{A_4} = 13 \quad (299)$$

$$S_{A_5} = 15 \quad (300)$$

$$T_2 = 5 \frac{30 + 20 + 15}{3} \quad (301)$$

$$T_2 = 108.3333 \quad (302)$$

### Required Elements ( $T_3$ )

	MU	GY	PO	SP	RE	WR
$B_1$	3	3	3	2	2	2
$B_2$	3	3	3	2	2	2
$B_3$	3	3	3	2	2	2

$$S_{B_1} = 14 \quad (303)$$

$$S_{B_2} = 14 \quad (304)$$

$$S_{B_3} = 14 \quad (305)$$

$$T_3 = \frac{50}{14} \times \frac{14 + 14 + 14}{3} \quad (306)$$

$$T_3 = 50 \quad (307)$$

### Difficulty ( $T_1$ )

	L2	L3	L4	L5	L6
$D_1$	10	10	10	10	10
$D_2$	10	10	25	10	10
$D_3$	10	10	25	10	10
$D_4$	10	10	25	10	10
$D_5$	10	10	10	10	10

$$S_{D_1} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (308)$$

$$S_{D_2} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 12.2222 \\ L4 = 30 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 98.1481 \quad (309)$$

$$S_{D_3} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 12.2222 \\ L4 = 30 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 98.1481 \quad (310)$$

$$S_{D_4} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 12.2222 \\ L4 = 30 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 98.1481 \quad (311)$$

$$S_{D_5} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (312)$$

$$T_1 = 2.5 \frac{78.1481 + 98.1481 + 98.1481}{3} \quad (313)$$

$$T_1 = 228.7036 \quad (314)$$

**Misses ( $T_5$ )**

	MINOR	MAJOR	TIME	SPACE
<i>HJ</i>	0	0	0	1
<i>A</i> <sub>1</sub>	0	0		
<i>A</i> <sub>2</sub>	0	0		
<i>A</i> <sub>3</sub>	0	0		
<i>A</i> <sub>4</sub>	0	0		
<i>A</i> <sub>5</sub>	0	0		
<i>B</i> <sub>1</sub>	0	0		
<i>B</i> <sub>2</sub>	0	0		
<i>B</i> <sub>3</sub>	0	0		

$$M_{HJ} = 0 \quad (315)$$

$$M_{A_1} = 0 \quad (316)$$

$$M_{A_2} = 0 \quad (317)$$

$$M_{A_3} = 0 \quad (318)$$

$$M_{A_4} = 0 \quad (319)$$

$$M_{A_5} = 0 \quad (320)$$

$$M_{B_1} = 0 \quad (321)$$

$$M_{B_2} = 0 \quad (322)$$

$$M_{B_3} = 0 \quad (323)$$

$$T_5 = \frac{0 + 0 + 0 + 0 + 0 + 0 + 0}{7} + 12.5 + 0 \quad (324)$$

$$T_5 = 12.5 \quad (325)$$

$T_1$ 228.7036	$T_2$ 108.3333	$T_3$ 50	$T_4$ 158.3333	$T_5$ 12.5
$R_{Diff}$ 222.4536		$R_{Crea}$ 152.0833		$R$ 749.0738

**C – M006 L4 cap capping L3, no misses****Presentation ( $T_2$ )**

	MoB	UoM	Mov	FBE	ORI	OIM
$A_1$	10	10	10	10	10	10
$A_2$	7.5	7.5	7.5	7.5	7.5	7.5
$A_3$	1	2	3	2	1	0
$A_4$	6	5	4	3	2	1
$A_5$	1	2	3	4	5	6

$$S_{A_1} = 40 \quad (326)$$

$$S_{A_2} = 30 \quad (327)$$

$$S_{A_3} = 6 \quad (328)$$

$$S_{A_4} = 13 \quad (329)$$

$$S_{A_5} = 15 \quad (330)$$

$$T_2 = 5 \frac{30 + 15 + 13}{3} \quad (331)$$

$$T_2 = 96.6667 \quad (332)$$

**Required Elements ( $T_3$ )**

	MU	GY	PO	SP	RE	WR
$B_1$	3	3	2	2	2	0
$B_2$	3	2	3	2	0	2
$B_3$	3	2	2	3	2	2

$$S_{B_1} = 12 \quad (333)$$

$$S_{B_2} = 12 \quad (334)$$

$$S_{B_3} = 14 \quad (335)$$

$$T_3 = \frac{50}{14} \times \frac{12 + 12 + 14}{3} \quad (336)$$

$$T_3 = 45.2381 \quad (337)$$

**Difficulty ( $T_1$ )**

	L2	L3	L4	L5	L6
$D_1$	10	10	10	10	10
$D_2$	10	20	25	10	10
$D_3$	10	20	25	10	10
$D_4$	10	20	25	10	10
$D_5$	10	10	10	10	10



$$S_{D_1} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (338)$$

$$S_{D_2} = \left\{ \begin{array}{l} L2 = 7.0370 \\ L3 = 20 \\ L4 = 30 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 107.0370 \quad (339)$$

$$S_{D_3} = \left\{ \begin{array}{l} L2 = 7.0370 \\ L3 = 20 \\ L4 = 30 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 107.0370 \quad (340)$$

$$S_{D_4} = \left\{ \begin{array}{l} L2 = 7.0370 \\ L3 = 20 \\ L4 = 30 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 107.0370 \quad (341)$$

$$S_{D_5} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (342)$$

$$T_1 = 2.5 \frac{78.1481 + 107.0370 + 107.0370}{3} \quad (343)$$

$$T_1 = 243.5184 \quad (344)$$

### Misses ( $T_5$ )

	MINOR	MAJOR	TIME	SPACE
<i>HJ</i>	0	0	0	0
<i>A</i> <sub>1</sub>	0	0		
<i>A</i> <sub>2</sub>	0	0		
<i>A</i> <sub>3</sub>	0	0		
<i>A</i> <sub>4</sub>	0	0		
<i>A</i> <sub>5</sub>	0	0		
<i>B</i> <sub>1</sub>	0	0		
<i>B</i> <sub>2</sub>	0	0		
<i>B</i> <sub>3</sub>	0	0		

$$M_{HJ} = 0 \quad (345)$$

$$M_{A_1} = 0 \quad (346)$$

$$M_{A_2} = 0 \quad (347)$$

$$M_{A_3} = 0 \quad (348)$$

$$M_{A_4} = 0 \quad (349)$$

$$M_{A_5} = 0 \quad (350)$$

$$M_{B_1} = 0 \quad (351)$$

$$M_{B_2} = 0 \quad (352)$$

$$M_{B_3} = 0 \quad (353)$$

$$T_5 = \frac{0 + 0 + 0 + 0 + 0 + 0 + 0}{7} + 0 + 0 \quad (354)$$

$$T_5 = 0 \quad (355)$$

$T_1$ 243.5184	$T_2$ 96.6667	$T_3$ 45.2381	$T_4$ 141.9048	$T_5$ 0
$R_{Diff}$ 243.5184		$R_{Crea}$ 141.9048		$R$ 770.8464

## C – M007 L4 cap capping L3 capping L2, negative score, more than 500 in deductions

### Presentation ( $T_2$ )

	MoB	UoM	Mov	FBE	ORI	OIM
$A_1$	10	10	10	10	10	10
$A_2$	7.5	7.5	7.5	7.5	7.5	7.5
$A_3$	1	2	3	2	1	0
$A_4$	6	5	4	3	2	1
$A_5$	1	2	3	4	5	6

$$S_{A_1} = 40 \quad (356)$$

$$S_{A_2} = 30 \quad (357)$$

$$S_{A_3} = 6 \quad (358)$$

$$S_{A_4} = 13 \quad (359)$$

$$S_{A_5} = 15 \quad (360)$$

$$T_2 = 5 \frac{30 + 15 + 13}{3} \quad (361)$$

$$T_2 = 96.6667 \quad (362)$$

### Required Elements ( $T_3$ )

	MU	GY	PO	SP	RE	WR
$B_1$	3	3	2	2	2	0
$B_2$	3	2	3	2	0	2
$B_3$	3	2	2	3	2	2

$$S_{B_1} = 12 \quad (363)$$

$$S_{B_2} = 12 \quad (364)$$

$$S_{B_3} = 14 \quad (365)$$

$$T_3 = \frac{50}{14} \times \frac{12 + 12 + 14}{3} \quad (366)$$

$$T_3 = 45.2381 \quad (367)$$

### Difficulty ( $T_1$ )

	L2	L3	L4	L5	L6
$D_1$	10	10	10	10	10
$D_2$	5	25	25	10	5
$D_3$	5	25	25	10	5
$D_4$	5	25	25	10	5
$D_5$	10	10	10	10	10

$$S_{D_1} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (368)$$

$$S_{D_2} = \left\{ \begin{array}{l} L2 = 8.5185 \\ L3 = 20 \\ L4 = 30 \\ L5 = 20 \\ L6 = 15 \end{array} \right\} = 93.5185 \quad (369)$$

$$S_{D_3} = \left\{ \begin{array}{l} L2 = 8.5185 \\ L3 = 20 \\ L4 = 30 \\ L5 = 20 \\ L6 = 15 \end{array} \right\} = 93.5185 \quad (370)$$

$$S_{D_4} = \left\{ \begin{array}{l} L2 = 8.5185 \\ L3 = 20 \\ L4 = 30 \\ L5 = 20 \\ L6 = 15 \end{array} \right\} = 93.5185 \quad (371)$$

$$S_{D_5} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (372)$$

$$T_1 = 2.5 \frac{78.1481 + 93.5185 + 93.5185}{3} \quad (373)$$

$$T_1 = 220.9876 \quad (374)$$

### Misses ( $T_5$ )

	MINOR	MAJOR	TIME	SPACE
<i>HJ</i>	10	11	1	6
<i>A</i> <sub>1</sub>	10	12		
<i>A</i> <sub>2</sub>	10	12		
<i>A</i> <sub>3</sub>	10	12		
<i>A</i> <sub>4</sub>	10	12		
<i>A</i> <sub>5</sub>	10	12		
<i>B</i> <sub>1</sub>	10	12		
<i>B</i> <sub>2</sub>	10	12		
<i>B</i> <sub>3</sub>	10	13		

$$M_{HJ} = 400 \tag{375}$$

$$M_{A_1} = 425 \tag{376}$$

$$M_{A_2} = 425 \tag{377}$$

$$M_{A_3} = 425 \tag{378}$$

$$M_{A_4} = 425 \tag{379}$$

$$M_{A_5} = 425 \tag{380}$$

$$M_{B_1} = 425 \tag{381}$$

$$M_{B_2} = 425 \tag{382}$$

$$M_{B_3} = 450 \tag{383}$$

$$T_5 = \frac{425 + 425 + 425 + 425 + 425 + 425 + 425}{7} + 75 + 25 \tag{384}$$

$$T_5 = 525 \tag{385}$$

$T_1$ 220.9876	$T_2$ 96.6667	$T_3$ 45.2381	$T_4$ 141.9048	$T_5$ 525
$R_{Diff}$ -41.5124		$R_{Crea}$ -120.5952		$R$ -324.2152

**C – M008 L4 cap to capped L3, score over 1000****Presentation ( $T_2$ )**

	MoB	UoM	Mov	FBE	ORI	OIM
$A_1$	10	10	10	10	10	10
$A_2$	10	10	10	10	10	10
$A_3$	10	10	10	10	10	10
$A_4$	10	10	10	10	10	10
$A_5$	10	10	10	10	10	10

$$S_{A_1} = 40 \quad (386)$$

$$S_{A_2} = 40 \quad (387)$$

$$S_{A_3} = 40 \quad (388)$$

$$S_{A_4} = 40 \quad (389)$$

$$S_{A_5} = 40 \quad (390)$$

$$T_2 = 5 \frac{40 + 40 + 40}{3} \quad (391)$$

$$T_2 = 200 \quad (392)$$

**Required Elements ( $T_3$ )**

	MU	GY	PO	SP	RE	WR
$B_1$	3	3	3	3	3	3
$B_2$	3	3	3	3	3	3
$B_3$	3	3	3	3	3	3

$$S_{B_1} = 14 \quad (393)$$

$$S_{B_2} = 14 \quad (394)$$

$$S_{B_3} = 14 \quad (395)$$

$$T_3 = \frac{50}{14} \times \frac{14 + 14 + 14}{3} \quad (396)$$

$$T_3 = 50 \quad (397)$$

**Difficulty ( $T_1$ )**

	L2	L3	L4	L5	L6
$D_1$	10	10	10	10	10
$D_2$	5	25	25	15	10
$D_3$	5	25	25	15	10
$D_4$	5	25	25	15	10
$D_5$	10	10	10	10	10

$$S_{D_1} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (398)$$

$$S_{D_2} = \left\{ \begin{array}{l} L2 = 8.5185 \\ L3 = 20 \\ L4 = 30 \\ L5 = 30 \\ L6 = 30 \end{array} \right\} = 118.5185 \quad (399)$$

$$S_{D_3} = \left\{ \begin{array}{l} L2 = 8.5185 \\ L3 = 20 \\ L4 = 30 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 118.5185 \quad (400)$$

$$S_{D_4} = \left\{ \begin{array}{l} L2 = 8.5185 \\ L3 = 20 \\ L4 = 30 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 118.5185 \quad (401)$$

$$S_{D_5} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (402)$$

$$T_1 = 2.5 \frac{78.1481 + 118.5185 + 118.5185}{3} \quad (403)$$

$$T_1 = 262,6543 \quad (404)$$

**Misses ( $T_5$ )**

	MINOR	MAJOR	TIME	SPACE
<i>HJ</i>	1	0	0	0
<i>A</i> <sub>1</sub>	1	0		
<i>A</i> <sub>2</sub>	1	0		
<i>A</i> <sub>3</sub>	1	0		
<i>A</i> <sub>4</sub>	1	0		
<i>A</i> <sub>5</sub>	1	0		
<i>B</i> <sub>1</sub>	1	0		
<i>B</i> <sub>2</sub>	1	0		
<i>B</i> <sub>3</sub>	1	0		

$$M_{HJ} = 12.5 \quad (405)$$

$$M_{A_1} = 37.5 \quad (406)$$

$$M_{A_2} = 12.5 \quad (407)$$

$$M_{A_3} = 37.5 \quad (408)$$

$$M_{A_4} = 12.5 \quad (409)$$

$$M_{A_5} = 37.5 \quad (410)$$

$$M_{B_1} = 12.5 \quad (411)$$

$$M_{B_2} = 37.5 \quad (412)$$

$$M_{B_3} = 12.5 \quad (413)$$

$$T_5 = \frac{12.5 + 12.5 + 12.5 + 12.5 + 12.5 + 12.5 + 12.5}{7} + 0 + 0 \quad (414)$$

$$T_5 = 12.5 \quad (415)$$

$T_1$ 262.6543	$T_2$ 200	$T_3$ 50	$T_4$ 250	$T_5$ 12.5
$R_{Diff}$ 256.4043		$R_{Crea}$ 243.75		$R$ 1000.3086



**C – M009 L4 cap to capped L3 capping L2****Presentation ( $T_2$ )**

	MoB	UoM	Mov	FBE	ORI	OIM
$A_1$	10	10	10	10	10	10
$A_2$	7.5	7.5	7.5	7.5	7.5	7.5
$A_3$	5	5	5	5	5	5
$A_4$	6	5	4	3	2	1
$A_5$	1	2	3	4	5	6

$$S_{A_1} = 40 \quad (416)$$

$$S_{A_2} = 30 \quad (417)$$

$$S_{A_3} = 20 \quad (418)$$

$$S_{A_4} = 15 \quad (419)$$

$$S_{A_5} = 13 \quad (420)$$

$$T_2 = 5 \frac{30 + 20 + 15}{3} \quad (421)$$

$$T_2 = 108.3333 \quad (422)$$

**Required Elements ( $T_3$ )**

	MU	GY	PO	SP	RE	WR
$B_1$	3	3	2	2	2	0
$B_2$	3	2	1	2	0	2
$B_3$	3	2	2	3	2	2

$$S_{B_1} = 12 \quad (423)$$

$$S_{B_2} = 10 \quad (424)$$

$$S_{B_3} = 14 \quad (425)$$

$$T_3 = \frac{50}{14} \times \frac{12 + 10 + 14}{3} \quad (426)$$

$$T_3 = 42.8571 \quad (427)$$

**Difficulty ( $T_1$ )**

	L2	L3	L4	L5	L6
$D_1$	10	10	10	10	10
$D_2$	10	25	25	10	5
$D_3$	10	25	25	10	5
$D_4$	10	25	25	10	5
$D_5$	10	10	10	10	10

$$S_{D_1} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (428)$$

$$S_{D_2} = \left\{ \begin{array}{l} L2 = 10 \\ L3 = 20 \\ L4 = 30 \\ L5 = 20 \\ L6 = 15 \end{array} \right\} = 95 \quad (429)$$

$$S_{D_3} = \left\{ \begin{array}{l} L2 = 10 \\ L3 = 20 \\ L4 = 30 \\ L5 = 20 \\ L6 = 15 \end{array} \right\} = 95 \quad (430)$$

$$S_{D_4} = \left\{ \begin{array}{l} L2 = 10 \\ L3 = 20 \\ L4 = 30 \\ L5 = 20 \\ L6 = 15 \end{array} \right\} = 95 \quad (431)$$

$$S_{D_5} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (432)$$

$$T_1 = 2.5 \frac{78.1481 + 95 + 95}{3} \quad (433)$$

$$T_1 = 223.4568 \quad (434)$$

### Misses ( $T_5$ )

	MINOR	MAJOR	TIME	SPACE
<i>HJ</i>	0	0	0	1
<i>A</i> <sub>1</sub>	1	0		
<i>A</i> <sub>2</sub>	0	1		
<i>A</i> <sub>3</sub>	1	1		
<i>A</i> <sub>4</sub>	0	0		
<i>A</i> <sub>5</sub>	1	0		
<i>B</i> <sub>1</sub>	0	1		
<i>B</i> <sub>2</sub>	1	1		
<i>B</i> <sub>3</sub>	0	0		

$$M_{HJ} = 0 \tag{435}$$

$$M_{A_1} = 12.5 \tag{436}$$

$$M_{A_2} = 25 \tag{437}$$

$$M_{A_3} = 37.5 \tag{438}$$

$$M_{A_4} = 0 \tag{439}$$

$$M_{A_5} = 12.5 \tag{440}$$

$$M_{B_1} = 25 \tag{441}$$

$$M_{B_2} = 37.5 \tag{442}$$

$$M_{B_3} = 0 \tag{443}$$

$$T_5 = \frac{0 + 0 + 12.5 + 12.5 + 25 + 25 + 37.5}{7} + 12.5 + 0 \tag{444}$$

$$T_5 = 28,5714 \tag{445}$$

$T_1$ 223.4568	$T_2$ 108.3333	$T_3$ 42.8571	$T_4$ 151.1904	$T_5$ 28.5714
$R_{Diff}$ 209.1711		$R_{Crea}$ 136.9047		$R$ 692.1516

**C – M010 L4 cap to capped L3 to capped L2, 10.5 presentation****Presentation ( $T_2$ )**

	MoB	UoM	Mov	FBE	ORI	OIM
$A_1$	10	10	10	10	10	10
$A_2$	7.5	7.5	7.5	7.5	7.5	7.5
$A_3$	5	5	5	5	5	5
$A_4$	2.5	2.5	2.5	10.5	10.5	10.5
$A_5$	1	10.5	10.5	0	5	9.5

$$S_{A_1} = 40 \quad (446)$$

$$S_{A_2} = 30 \quad (447)$$

$$S_{A_3} = 20 \quad (448)$$

$$S_{A_4} = 28.75 \quad (449)$$

$$S_{A_5} = 20.25 \quad (450)$$

$$T_2 = 5 \frac{30 + 28.75 + 20.25}{3} \quad (451)$$

$$T_2 = 131.6667 \quad (452)$$

**Required Elements ( $T_3$ )**

	MU	GY	PO	SP	RE	WR
$B_1$	3	3	2	2	2	0
$B_2$	3	2	1	2	0	2
$B_3$	3	2	2	3	2	2

$$S_{B_1} = 12 \quad (453)$$

$$S_{B_2} = 10 \quad (454)$$

$$S_{B_3} = 14 \quad (455)$$

$$T_3 = \frac{50}{14} \times \frac{12 + 10 + 14}{3} \quad (456)$$

$$T_3 = 42.8571 \quad (457)$$

**Difficulty ( $T_1$ )**

	L2	L3	L4	L5	L6
$D_1$	10	10	10	10	10
$D_2$	25	25	25	10	5
$D_3$	25	25	25	10	5
$D_4$	25	25	25	10	5
$D_5$	10	10	10	10	10

$$S_{D_1} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (458)$$

$$S_{D_2} = \left\{ \begin{array}{l} L2 = 10 \\ L3 = 20 \\ L4 = 30 \\ L5 = 20 \\ L6 = 15 \end{array} \right\} = 95 \quad (459)$$

$$S_{D_3} = \left\{ \begin{array}{l} L2 = 10 \\ L3 = 20 \\ L4 = 30 \\ L5 = 20 \\ L6 = 15 \end{array} \right\} = 95 \quad (460)$$

$$S_{D_4} = \left\{ \begin{array}{l} L2 = 10 \\ L3 = 20 \\ L4 = 30 \\ L5 = 20 \\ L6 = 15 \end{array} \right\} = 95 \quad (461)$$

$$S_{D_5} = \left\{ \begin{array}{l} L2 = 5.9259 \\ L3 = 8.8889 \\ L4 = 13.3333 \\ L5 = 20 \\ L6 = 30 \end{array} \right\} = 78.1481 \quad (462)$$

$$T_1 = 2.5 \frac{78.1481 + 95 + 95}{3} \quad (463)$$

$$T_1 = 223.4568 \quad (464)$$

**Misses ( $T_5$ )**

	MINOR	MAJOR	TIME	SPACE
<i>HJ</i>	0	0	0	1
<i>A</i> <sub>1</sub>	1	0		
<i>A</i> <sub>2</sub>	0	1		
<i>A</i> <sub>3</sub>	1	1		
<i>A</i> <sub>4</sub>	0	0		
<i>A</i> <sub>5</sub>	1	0		
<i>B</i> <sub>1</sub>	0	1		
<i>B</i> <sub>2</sub>	1	1		
<i>B</i> <sub>3</sub>	0	0		

$$M_{HJ} = 0 \quad (465)$$

$$M_{A_1} = 12.5 \quad (466)$$

$$M_{A_2} = 25 \quad (467)$$

$$M_{A_3} = 37.5 \quad (468)$$

$$M_{A_4} = 0 \quad (469)$$

$$M_{A_5} = 12.5 \quad (470)$$

$$M_{B_1} = 25 \quad (471)$$

$$M_{B_2} = 37.5 \quad (472)$$

$$M_{B_3} = 0 \quad (473)$$

$$T_5 = \frac{0 + 0 + 12.5 + 12.5 + 25 + 25 + 37.5}{7} + 12.5 + 0 \quad (474)$$

$$T_5 = 28.5714 \quad (475)$$

$T_1$ 223.4568	$T_2$ 131.6667	$T_3$ 42.8571	$T_4$ 174.5238	$T_5$ 28.5714
$R_{Diff}$ 209.1711		$R_{Crea}$ 160.2381		$R$ 738.8184

**C – M011 Total Score is Zero****Presentation ( $T_2$ )**

	MoB	UoM	Mov	FBE	ORI	OIM
$A_1$	0	0	0	0	0	0
$A_2$	0	0	0	0	0	0
$A_3$	0	0	0	0	0	0
$A_4$	0	0	0	0	0	0
$A_5$	0	0	0	0	0	0

$$S_{A_1} = 0 \quad (476)$$

$$S_{A_2} = 0 \quad (477)$$

$$S_{A_3} = 0 \quad (478)$$

$$S_{A_4} = 0 \quad (479)$$

$$S_{A_5} = 0 \quad (480)$$

$$T_2 = 5 \frac{0+0+0}{3} \quad (481)$$

$$T_2 = 0 \quad (482)$$

**Required Elements ( $T_3$ )**

	MU	GY	PO	SP	RE	WR
$B_1$	0	0	0	0	0	0
$B_2$	0	0	0	0	0	0
$B_3$	0	0	0	0	0	0

$$S_{B_1} = 0 \quad (483)$$

$$S_{B_2} = 0 \quad (484)$$

$$S_{B_3} = 0 \quad (485)$$

$$T_3 = \frac{50}{14} \times \frac{0+0+0}{3} \quad (486)$$

$$T_3 = 0 \quad (487)$$

**Difficulty ( $T_1$ )**

	L2	L3	L4	L5	L6
$D_1$	0	0	0	0	0
$D_2$	0	0	0	0	0
$D_3$	0	0	0	0	0
$D_4$	0	0	0	0	0
$D_5$	0	0	0	0	0

$$S_{D_1} = \left\{ \begin{array}{l} L2 = 0 \\ L3 = 0 \\ L4 = 0 \\ L5 = 0 \\ L6 = 0 \end{array} \right\} = 0 \quad (488)$$

$$S_{D_2} = \left\{ \begin{array}{l} L2 = 0 \\ L3 = 0 \\ L4 = 0 \\ L5 = 0 \\ L6 = 0 \end{array} \right\} = 0 \quad (489)$$

$$S_{D_3} = \left\{ \begin{array}{l} L2 = 0 \\ L3 = 0 \\ L4 = 0 \\ L5 = 0 \\ L6 = 0 \end{array} \right\} = 0 \quad (490)$$

$$S_{D_4} = \left\{ \begin{array}{l} L2 = 0 \\ L3 = 0 \\ L4 = 0 \\ L5 = 0 \\ L6 = 0 \end{array} \right\} = 0 \quad (491)$$

$$S_{D_5} = \left\{ \begin{array}{l} L2 = 0 \\ L3 = 0 \\ L4 = 0 \\ L5 = 0 \\ L6 = 0 \end{array} \right\} = 0 \quad (492)$$

$$T_1 = 2.5 \frac{0+0+0}{3} \quad (493)$$

$$T_1 = 0 \quad (494)$$

### Misses ( $T_5$ )

	MINOR	MAJOR	TIME	SPACE
<i>HJ</i>	0	0	0	0
<i>A</i> <sub>1</sub>	0	0		
<i>A</i> <sub>2</sub>	0	0		
<i>A</i> <sub>3</sub>	0	0		
<i>A</i> <sub>4</sub>	0	0		
<i>A</i> <sub>5</sub>	0	0		
<i>B</i> <sub>1</sub>	0	0		
<i>B</i> <sub>2</sub>	0	0		
<i>B</i> <sub>3</sub>	0	0		



$$M_{HJ} = 0 \quad (495)$$

$$M_{A_1} = 0 \quad (496)$$

$$M_{A_2} = 0 \quad (497)$$

$$M_{A_3} = 0 \quad (498)$$

$$M_{A_4} = 0 \quad (499)$$

$$M_{A_5} = 0 \quad (500)$$

$$M_{B_1} = 0 \quad (501)$$

$$M_{B_2} = 0 \quad (502)$$

$$M_{B_3} = 0 \quad (503)$$

$$T_5 = \frac{0 + 0 + 0 + 0 + 0 + 0 + 0}{7} + 0 + 0 \quad (504)$$

$$T_5 = 0 \quad (505)$$

$T_1$ 0	$T_2$ 0	$T_3$ 0	$T_4$ 0	$T_5$ 0
$R_{Diff}$ 0		$R_{Crea}$ 0		$R$ 0

**C – M012 Did Not Skip**

$T_1$	$T_2$	$T_3$	$T_4$	$T_5$
$R_{Diff}$		$R_{Crea}$		$R$

## Event Ranks

Participant	$R_{Diff}$	Rank (Difficulty)	$R_{Crea}$	Rank (Creativity)	$R$	Ranksum	Rank (Ranksum)
M001	157.8703	9	105.3571	9	526.4548	18	9
M002	208.6639	6	126.8128	7	670.9532	13	7
M003	202.8218	8	123.8096	8	653.2626	16	8
M004	208.1789	7	147.0238	4	710.4054	11	6
M005	222.4536	3	152.0833	3	749.0738	6	2
M006	243.5184	2	141.9048	5	770.8464	7	4
M007	-41.5124	11	-120.5952	11	-324.2152	22	11
M008	256.4043	1	243.75	1	1000.3086	2	1
M009	209.1711	4	136.9047	6	692.1516	10	5
M010	209.1711	4	160.2381	2	738.8184	6	3
M011	0	10	0	10	0	20	10
M012							

## D Single Rope Triple Unders

$$T = \frac{S_x + S_y}{2} \quad (506)$$

The two closest scores are averaged.

$$W = 5F_{Start} \quad (507)$$

$$Y = T - W \quad (508)$$

if the score o one fiels is under 30, the first box of scores will be grayed out and a second box with the values actually taken into consideration present.

### D – M001 All Same

$S_1$	100
$S_2$	100
$S_3$	100
False Start	0

$$T = \frac{100 + 100}{2} \quad (509)$$

$$T = 100 \quad (510)$$

$$W = 5 * 0 \quad (511)$$

$$W = 0 \quad (512)$$

$$Y = 100 - 0 \quad (513)$$

$$Y = 100 \quad (514)$$

T 100	W 0	Y 100
----------	--------	----------

**D – M002 One High**

$S_1$	100
$S_2$	100
$S_3$	105
False Start	0

$$T = \frac{100 + 100}{2} \quad (515)$$

$$T = 100 \quad (516)$$

$$W = 5 * 0 \quad (517)$$

$$W = 0 \quad (518)$$

$$Y = 100 - 0 \quad (519)$$

$$Y = 100 \quad (520)$$

T 100	W 0	Y 100
----------	--------	----------

**D – M003 One Low**

$S_1$	100
$S_2$	100
$S_3$	95
False Start	0

$$T = \frac{100 + 100}{2} \quad (521)$$

$$T = 100 \quad (522)$$

$$W = 5 * 0 \quad (523)$$

$$W = 0 \quad (524)$$

$$Y = 100 - 0 \quad (525)$$

$$Y = 100 \quad (526)$$

T 100	W 0	Y 100
----------	--------	----------

**D – M004 Equally Spaced**

$S_1$	95
$S_2$	100
$S_3$	105
False Start	0

$$T = \frac{100 + 105}{2} \quad (527)$$

$$T = 102.5 \quad (528)$$

$$W = 5 * 0 \quad (529)$$

$$W = 0 \quad (530)$$

$$Y = 102.5 - 0 \quad (531)$$

$$Y = 102.5 \quad (532)$$

Reskip Allowed

T 102.5	W 0	Y 102.5
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**D – M005 One Higher Closest**

$S_1$	90
$S_2$	100
$S_3$	105
False Start	0

$$T = \frac{100 + 105}{2} \quad (533)$$

$$T = 102.5 \quad (534)$$

$$W = 5 * 0 \quad (535)$$

$$W = 0 \quad (536)$$

$$Y = 102.5 - 0 \quad (537)$$

$$Y = 102.5 \quad (538)$$

Reskip Allowed

T 102.5	W 0	Y 102.5
------------	--------	------------



**D – M006 One Lower Closest**

$S_1$	95
$S_2$	100
$S_3$	110
False Start	0

$$T = \frac{95 + 100}{2} \tag{539}$$

$$T = 97.5 \tag{540}$$

$$W = 5 * 0 \tag{541}$$

$$W = 0 \tag{542}$$

$$Y = 97.5 - 0 \tag{543}$$

$$Y = 97.5 \tag{544}$$

Reskip Allowed

T 97.5	W 0	Y 97.5
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**D – M007 False Start**

$S_1$	100
$S_2$	100
$S_3$	100
False Start	1

$$T = \frac{100 + 100}{2} \quad (545)$$

$$T = 100 \quad (546)$$

$$W = 5 * 1 \quad (547)$$

$$W = 5 \quad (548)$$

$$Y = 100 - 5 \quad (549)$$

$$Y = 95 \quad (550)$$

T 100	W 5	Y 95
----------	--------	---------

**D – M008 Blank**

$S_1$	20
$S_2$	20
$S_3$	20
False Start	0

The average of the two closest is less than 30 (20), thus a Second attempt is allowed

$S_1$	0
$S_2$	0
$S_3$	0
False Start	0

$$T = \frac{0 + 0}{2} \quad (551)$$

$$T = 0 \quad (552)$$

$$W = 5 * 0 \quad (553)$$

$$W = 0 \quad (554)$$

$$Y = 0 - 0 \quad (555)$$

$$Y = 0 \quad (556)$$

T 0	W 0	Y 0
--------	--------	--------

**D – M009 Zero**

$S_1$	29
$S_2$	29
$S_3$	29
False Start	0

The average of the two closest is less than 30 (29), thus a Second attempt is allowed

$S_1$	5
$S_2$	5
$S_3$	5
False Start	1

$$T = \frac{5 + 5}{2} \quad (557)$$

$$T = 5 \quad (558)$$

$$W = 5 * 1 \quad (559)$$

$$W = 5 \quad (560)$$

$$Y = 5 - 5 \quad (561)$$

$$Y = 0 \quad (562)$$

T 5	W 5	Y 0
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**D – M010 Negative**

$S_1$	29
$S_2$	28
$S_3$	29
False Start	0

The average of the two closest is less than 30 (29), thus a Second attempt is allowed

$S_1$	2
$S_2$	2
$S_3$	2
False Start	1

$$T = \frac{2 + 2}{2} \quad (563)$$

$$T = 2 \quad (564)$$

$$W = 5 * 1 \quad (565)$$

$$W = 5 \quad (566)$$

$$Y = 2 - 5 \quad (567)$$

$$Y = -3 \quad (568)$$

T 2	W 5	Y -3
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**D – M011 Scores separated by 4**

$S_1$	96
$S_2$	100
$S_3$	104
False Start	0

$$T = \frac{100 + 104}{2} \quad (569)$$

$$T = 102 \quad (570)$$

$$W = 5 * 0 \quad (571)$$

$$W = 0 \quad (572)$$

$$Y = 102 - 0 \quad (573)$$

$$Y = 102 \quad (574)$$

Reskip Allowed

T 102	W 0	Y 102
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**D – M012 Scores separated by 3**

$S_1$	97
$S_2$	100
$S_3$	103
False Start	0

$$T = \frac{100 + 103}{2} \quad (575)$$

$$T = 101.5 \quad (576)$$

$$W = 5 * 0 \quad (577)$$

$$W = 0 \quad (578)$$

$$Y = 101.5 - 0 \quad (579)$$

$$Y = 101.5 \quad (580)$$

T 101.5	W 0	Y 101.5
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**D – M013 Second Attempt, one at 30**

$S_1$	29
$S_2$	29
$S_3$	30
False Start	0

The average of the two closest is less than 30 (29), thus a Second attempt is allowed

$S_1$	100
$S_2$	100
$S_3$	100
False Start	0

$$T = \frac{100 + 100}{2} \quad (581)$$

$$T = 100 \quad (582)$$

$$W = 5 * 0 \quad (583)$$

$$W = 0 \quad (584)$$

$$Y = 100 - 0 \quad (585)$$

$$Y = 100 \quad (586)$$

T 100	W 0	Y 100
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**D – M014 Second Attempt, only one under 30**

$S_1$	29
$S_2$	30
$S_3$	32
False Start	0

The average of the two closest is less than 30 (29.5), thus a Second attempt is allowed

$S_1$	100
$S_2$	100
$S_3$	100
False Start	0

$$T = \frac{100 + 100}{2} \quad (587)$$

$$T = 100 \quad (588)$$

$$W = 5 * 0 \quad (589)$$

$$W = 0 \quad (590)$$

$$Y = 100 - 0 \quad (591)$$

$$Y = 100 \quad (592)$$

T 100	W 0	Y 100
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**Event Ranks**

<b>Participant</b>	<b>Score</b>	<b>Rank</b>
M001	100	5
M002	100	5
M003	100	5
M004	102.5	1
M005	102.5	1
M006	97.5	10
M007	95	11
M008	0	12
M009	0	12
M010	-3	14
M011	102	3
M012	101.5	4
M013	100	5
M014	100	5

## E Overall Ranks

Participant	Speed Sprint		Speed Endurance		Single Freestyle		Overall		
	Score	Rank	Score	Rank	Score	Rank	Total Score	Ranksum	Rank
M001	400	4	450	4	526.4548	9	1376.4548	26	7
M002	400	4	450	4	670.9532	7	1520.9532	22	5
M003	400	4	450	4	653.2626	8	1503.2626	24	6
M004	412.5	1	452.5	1	710.4054	6	1575.4052	14	2
M005	412.5	1	452.5	1	749.0738	2	1614.0738	6	1
M006	387.5	7	447.5	7	770.8464	4	1605.8464	22	4
M007	375	8	445	8	-324.2152	11	495.7848	38	11
M008	0	9	0	9	1000.3086	1	1000.3086	20	3
M009	0	9	0	9	692.1516	5	692.1516	28	10
M010	-15	11	-3	11	738.8184	3	720.8184	28	9
M011	410	3	452	3	0	10	862	26	8
M012	407.5		451.5						