

FINAL IYPT 2017

Team	Stage 1			Stage 2			Stage 3			Stage 4		
	Hungary	Poland	China	Poland	China	Singapore	China	Singapore	Hungary	Singapore	Hungary	Poland
Juror	Rep	Opp	Rev	Rep	Opp	Rev	Rep	Opp	Rev	Rep	Opp	Rev
Martin Plesch	7	5	6	9	7	7	8	7	5	5	7	5
Mattias Andersson	6	8	6	4	7	8	6	8	7	5	6	5
John Balcombe	6	7	7	6	7	7	7	8	6	5	8	7
Elia Eschenazi	9	7	8	5	6	9	6	9	6	10	6	7
Hong Jung	5	6	6	6	7	8	7	8	6	9	6	7
Daniel Keller	7	7	8	7	8	9	8	9	7	10	7	7
Ilya Martchenko	7	8	8	8	7	9	6	9	6	10	8	7
Susan Napier	6	7	8	6	6	6	6	7	6	5	6	6
Philip O'Neill	6	8	8	5	9	9	8	9	6	10	8	6
Tomas Opatrny	6	6	7	8	6	6	7	8	6	10	7	6
Nirut Pussadee	7	8	7	7	8	8	7	7	9	5	7	7
Acting Team Member	Barlasz	Marcin	Hao Tian Zhu	Flip-Kubacki	Hanbai-Lyu	Fu Xinghang	Ruyi Ding	Markus Lendormann	Eszter Varga-Cimbrak	Li Kang Chen	Aron Svab-His	Bartholomey
Problem	9 Ball in a Tube			17 Vacuum Bazooka			3 Single Lens Telescope			5 Leidenfrost Stars		



SCORESHEET

stage: IV fight (round no.): F room: 5 problem no.: 5 Juror's name: Plp. Sct
 reporter: SN opponent: HUW reviewer: POL signature: [Signature]

REPORTER 1 + 3.5 + 1 = 9
 Start from 1 and add/subtract

REPORT		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS	
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment
0 almost no	some	too few	no/ almost no	others' data, incorrectly cited	misunderstood
1 some	fair	some	some	some own input	partly
2 fair	good	well performed,	not well fitting	some interesting results	average
3 good		sufficient number	qualitatively analysed	considerable experimental	interesting solution
4 detailed	quite detailed,	+ results explained	+ theory limits	or theoretical	some aspects
5 demotivatory	correct	errors analysed	explained, conclusive	considerable experimental	above average
6 deep and comprehensible,	detailed, complex,	+ reproducible,	well fitting, deviations	and theoretical	greater extent
shows physical insight	completely testable	convincing analysis	analysed, conclusive		than expected

NOTES:

OPPONENT 1 + 1.7 + 2.5 - 0 = 7
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	scientific contribution of topics	own opinions presented	efficiency	prioritisation
0 almost no, irrelevant	almost nothing	irrelevant	very little	almost no	no
1 some relevant, aimed at resolving some unclear points	some main points	no or irrelevant	some	to some extent	almost no
2 short allowing short answers, prioritized, all time used	main points	few	some correct	leading or cooperative	some
	all relevant points	many	many correct	quite efficient	reasonable
	practically all points	practically all	+ improvement suggestions	very efficient	very good

NOTES: ↓ more

REVIEWER 1 + 4.8 + 1.5 + 7 - 0 = 5
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH OPPONENT		ANSWERS TO JURY QUESTIONS	
report summary & understanding	discussion analysis	own opinions	pros & cons	efficiency	prioritisation
0 too few, mostly irrelevant	almost no	too few	irrelevant	almost no, chaotic	no
1 some relevant, sufficient number, could clear things out	too short/long	some	partially relevant	avoided some questions	no questions asked
2 most time used, many unclear points resolved, aimed at both rep. and opp.	relevant parts	many	mostly adequate	cooperated well	some incorrect,
+short, apt and clear, well prioritized	accurate, conclusive	+ improvement suggestions	fully adequate	answered directly to most questions	inconclusive or too long
time managed efficiently				efficient, productive	deeply incorrect or show deep misconceptions

NOTES: ↓ more

SCORESHEET

Juror's name: J. BALCOMBE
signature: [Signature]

stage: 4 fight (round no.): FINAR room: [Blank]
reporter: Sigga opponent: Hagan reviewer: [Blank]

problem no.: [Blank]

REPORTER
1 + 5 + 3 - 0 = 9
Start from 1 and add/subtract

REPORT		DISCUSSION WITH OPPONENT		DISCUSSION WITH REPORTER		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS		
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency
0 almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 some	some	some	some	review of sources, cited	partly	only technical	some	avoided some questions
2 fair	fair	well performed, sufficient number	not well fitting deviations	some own input	average	points cleared	many	cooperated well
3 good	good	+ results explained	qualitatively analysed	some interesting results	interesting solution	some scientific		
4 detailed	quite detailed, correct	+ errors analysed	+ theory limits explained, conclusive	considerable experimental	some aspects above average	interesting points discussed		answered directly to most questions
5 demonstrative	correct	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	brought in new physics		efficient, productive
6 deep and comprehensible, shows physical insight	detailed, complex, completely testable							

NOTES:

OPPONENT
1 + 1 + 3 + 3 - 0 = 8
Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		DISCUSSION WITH OPPONENT		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	scientific contribution of topics	own opinions presented	efficiency	prioritisation
0 almost no, irrelevant	almost nothing	no or irrelevant	almost no	almost no	very little	almost no	no
1 some relevant, aimed at resolving some unclear points	some main points	few	some	little	some	to some extent	almost no
2 short allowing short answers, prioritized, all time used	main points	some	to important topics	partial	some correct	leading or cooperative	some
	all relevant points	many	to most topics + improvement	good	many correct	quite efficient	reasonable
	practically all points	practically all	suggestions	new crucial point(s)	+ improvement	very efficient	very good
					suggestions		

NOTES:

REVIEWER
1 + 1.5 + 2 + 2 - 0 = 7
Start from 1 and add/subtract

QUESTIONS ASKED		REVIEW OF REPORT		REVIEW OF OPPOSITION		ANSWERS TO JURY QUESTIONS	
time managed efficiently	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	speech summary	discussion analysis
0 too few, mostly irrelevant	poor	almost no	too few	irrelevant	no	poor	almost no
1 some relevant, sufficient number, could clear things out	partial	too short/long	some	partially relevant	almost no	too short/long	too short/long
2 most time used, many unclear points resolved, aimed at both rep. and opp.	good	relevant parts accurate, conclusive	many + improvement suggestions	mostly adequate fully	some	informative, apt	relevant parts
3 +short, apt and clear, well prioritized	detailed, complex			adequate	good	brief but accurate	accurate

NOTES:

SCORESHEET

REPORTER $1 + 4.5 + 3.5 - 0 = 9$

stage: 4

fight (round no.): Final

room:

problem no.: 5

Juror's name: Matias Andarino

reporter: Singapore

opponent: Hungary

reviewer: Poland

signature: An

REPORT		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS	
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment
0 almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood
1 some	some	some	some	review of sources, cited	partly
2 fair	fair	fair	not well fitting	some own input	average
3 good	good	well performed, sufficient number	qualitatively analysed	some interesting results	interesting
4 detailed	quite detailed, correct	+ results explained	+ theory limits	considerable experimental or theoretical	some aspects above average
5 demonstrative	deep and comprehensible, detailed, complex, shows physical insight	+ reproducible, convincing analysis	explained, conclusive, well fitting, deviations analysed, and theoretical	considerable experimental and theoretical	greater extent than expected
6	completely testable				

NOTES:

OPPONENT

Start from 1 and add/subtract

$1 + 1 + 2 + 2 - 0 = 6$

QUESTIONS ASKED

- 0 almost no, irrelevant
- 1 some relevant, aimed at resolving some unclear points
- 2 short allowing short answers, prioritized, all time used
- 3
- 4

NOTES:

inhomogeneous

POSITION (SPEECH)

time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation
0 almost no	almost nothing	no or irrelevant	almost no	no
1 very little	some main points	few	some	almost no
2 not all	main points	some	to important topics	some
3 almost all	all relevant points	many	to most topics	reasonable
4 all & efficiently	practically all points	practically all	+ improvement suggestions	very good

DISCUSSION WITH REPORTER

scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation
0 almost no	irrelevant	very little	almost no	no
1 little	some	some	to some extent	almost no
2 partial	average	some correct	leading or cooperative	some
3 good	many	many correct	quite efficient	reasonable
4 new crucial point(s)	almost all	+ improvement suggestions	very efficient	very good

ANSWERS TO JURY and REVIEWER'S QUESTIONS

- 0 X concise and correct or no questions asked
- 1 some incorrect, inconclusive or too long
- 2 deeply incorrect or show deep misconceptions

REVIEWER

Start from 1 and add/subtract

$1 + 1 + 2 + 2 - 0 = 5$

QUESTIONS ASKED

- 0 too few, mostly irrelevant
- 1 X some relevant, sufficient number, could clear things out
- 2 most time used, many unclear points resolved, aimed at both rep. and opp.
- 3 +short, apt and clear, well prioritized time managed efficiently

NOTES:

REVIEW OF REPORT

report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation
0 poor	almost no	too few	irrelevant	no
1 partial	too short/long	some	partially relevant	almost no
2 good	relevant parts	many	mostly adequate	some
3 detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	good

REVIEW OF OPPOSITION

speech summary	discussion analysis	own opinions	pros & cons	prioritisation
0 poor	almost no	too few	irrelevant	no
1 too short/long	too short/long	some	partially relevant	almost no
2 informative, apt	relevant parts	many	mostly adequate	some
3 brief but accurate	accurate, conclusive	+ improvement suggestions	fully adequate	good

ANSWERS TO JURY QUESTIONS

- 0 X concise and correct or no questions asked
- 1 some incorrect, inconclusive or too long
- 2 deeply incorrect or show deep misconceptions

SCORESHEET

Juror's name: Hong Jung
signature: [Signature]

room: Final
reviewer: [Signature]

fight (round no.): 4
opponent: [Signature]

stage: Final
reporter: [Signature]

REPORTER Start from 1 and add/subtract
1 + 5 + 3 - 0 = 9

REPORT	DISCUSSION WITH OPPONENT				task fulfilment	DISCUSSION WITH REPORTER			
	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment		own contribution	scientific contribution	relevant arguments/responses	efficiency
0	almost no	almost no	too few	no/ almost no	misunderstood	almost no	too few	almost no, chaotic	
1	some	some	some	some	partly	only technical	some	avoided some questions	
2	fair	fair	fair	not well fitting	average	points cleared	many	cooperated well	
3	good	good	well performed, sufficient number	deviations	interesting solution	some scientific			
4	detailed	quite detailed, correct	+ results explained	qualitatively analysed	some aspects	interesting points	+ data/theory	answered directly to most questions	
5	demonstrative	correct	+ errors analysed	+ theory limits	above average	discussed	convincingly supported	efficient, productive	
6	deep and comprehensive	detailed, complex, completely testable	+ reproducible, convincing analysis	explained, conclusive	greater extent than expected	brought in new physics	proved deep understanding		

NOTES:

OPPONENT

Start from 1 and add/subtract
1 + 1 + 2 + 2 - 0 = 6

QUESTIONS ASKED	DISCUSSION WITH OPPONENT				task fulfilment	DISCUSSION WITH REPORTER			
	time used	understanding of presentation	relevant topics addressed	correct own opinions expressed		scientific contribution	relevance of topics	own opinions presented	efficiency
0	almost no	almost nothing	no or irrelevant	almost no	almost no	irrelevant	very little	almost no	
1	very little	some main points	few	some	1	little	some	almost no	
2	not all	main points	some	to important topics	2	partial	some correct	to some extent	
3	almost all	all relevant points	many	to most topics	3	good	many correct	leading or cooperative	
4	all & efficiently	practically all points	practically all	+ improvement suggestions	4	new crucial point(s)	+ improvement suggestions	quite efficient	

NOTES:

REVIEWER

Start from 1 and add/subtract
1 + 1.5 + 2 + 2 - 0 = 6.5

QUESTIONS ASKED	DISCUSSION WITH OPPONENT				task fulfilment	DISCUSSION WITH REPORTER			
	time used	understanding of presentation	relevant topics addressed	correct own opinions expressed		scientific contribution	relevance of topics	own opinions presented	efficiency
0	too few, mostly irrelevant	some relevant, sufficient number, could clear things out	most time used, many unclear points resolved, aimed at both rep. and opp.	+short, apt and clear, well prioritized	time managed efficiently	almost no, chaotic	avoided some questions	cooperated well	
1	some relevant, sufficient number, could clear things out	most time used, many unclear points resolved, aimed at both rep. and opp.	+short, apt and clear, well prioritized	time managed efficiently	some aspects	interesting points	convincingly supported	efficient, productive	
2	most time used, many unclear points resolved, aimed at both rep. and opp.	+short, apt and clear, well prioritized	time managed efficiently	some aspects	above average	discussed	convincingly supported	efficient, productive	
3	+short, apt and clear, well prioritized	time managed efficiently	some aspects	above average	greater extent than expected	brought in new physics	proved deep understanding		

NOTES:

SCORESHEET

REPORTER
 1 + 6 + 4 - 0 = 10
 Start from 1 and add/subtract

stage: 4 fight (round no.): 6
 reporter: Singapore opponent: Thailand

room: 5 problem no.: 5
 reviewer: Almond

Juror's name: P. K. M.
 signature: [Signature]

REPORT		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS	
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment
0 almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood
1 some	some	some	some	review of sources, cited	partly
2 fair	fair	fair	not well fitting	some own input	average
3 good	good	well performed, sufficient number	qualitatively analysed	some interesting results	interesting solution
4 detailed	quite detailed, correct	+ results explained	+ theory limits	considerable experimental or theoretical	some aspects above average
5 demonstrative	deep and comprehensible, shows physical insight	errors analysed	explained, conclusive	considerable experimental and theoretical	greater extent than expected
6		+ reproducible	well fitting, deviations analysed, conclusive		

DISCUSSION WITH OPPONENT

scientific contribution	relevant arguments/responses	efficiency
0 almost no	too few	almost no, chaotic
1 only technical	some	avoided some questions
2 some scientific	many	cooperated well
3 points cleared	+ data/theory	answered directly
4 interesting points discussed	convincingly supported	to most questions
5 brought in new physics	proved deep understanding	efficient, productive

ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS

0	concise and correct or no questions asked
-1	some incorrect, inconclusive or too long
-2	deeply incorrect or show deep misconceptions

NOTES:
 Chimney stability

OPPONENT
 1 + 2 + 2 - 0 = 4
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	scientific contribution of topics	own opinions presented	efficiency	prioritisation
0 almost no	almost nothing	almost no	very little	almost no	no
1 very little	some main points	irrelevant	some	to some extent	almost no
2 not all	main points	average	some correct	leading or cooperative	some
3 almost all	all relevant points	good	many correct	quite efficient	reasonable
4 all & efficiently	practically all points	new crucial point(s)	+ improvement suggestions	very efficient	very good

NOTES:
 almost no, irrelevant
 some relevant, aimed at resolving some unclear points
 short allowing short answers, prioritized, all time used

REVIEWER
 1 + 2 + 2 - 0 = 4
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	speech summary
0 poor	almost no	too few	irrelevant	no	poor
1 partial	too short/long	some	partially relevant	almost no	too short/long
2 good	relevant parts	many	mostly adequate	some	informative, apt relevant parts
3 detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	good	brief but accurate

NOTES:
 too few, mostly irrelevant
 some relevant, sufficient number, could clear things out
 most time used, many unclear points resolved, aimed at both rep. and opp.
 +short, apt and clear, well prioritized time managed efficiently

SCORESHEET

REPORTER

Start from 1 and add/subtract
 1 + + - =

stage:

fight (round no.):

room:

problem no.:

Juror's name:

reporter: opponent: reviewer:

signature:

REPORT		DISCUSSION WITH OPPONENT		DISCUSSION WITH REPORTER		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS		
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	scientific contribution	relevant arguments/responses	efficiency
0 <input type="checkbox"/> almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 <input type="checkbox"/> some	some	some	some	review of sources, cited	partly	only technical	some	avoided some questions
2 <input type="checkbox"/> fair	fair	fair	not well fitting	some own input	average	points cleared	many	cooperated well
3 <input type="checkbox"/> good	good	sufficient number	deviations	some interesting results	interesting solution	points cleared		
4 <input type="checkbox"/> detailed	quite detailed, correct	well performed, errors analysed	qualitatively analysed	considerable experimental or theoretical	some aspects above average	interesting points discussed	+ data/theory	answered directly to most questions
5 <input type="checkbox"/> demonstrative	correct	+ results explained	+ theory limits explained, conclusive	considerable experimental	greater extent than expected	brought in new physics	convincingly supported	efficient, productive
6 <input type="checkbox"/> deep and comprehensive, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	analysed, conclusive	good theoretical				

NOTES:

OPPONENT

Start from 1 and add/subtract
 1 + + + - =

QUESTIONS ASKED		OPPOSITION (SPEECH)		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS				
	time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation	scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation
0 <input type="checkbox"/> almost no, irrelevant	almost no	almost nothing	no or irrelevant	almost no	no	almost no	irrelevant	very little	almost no	no
1 <input type="checkbox"/> some relevant, aimed at resolving some unclear points	very little	some main points	few	some	almost no	little	some	some	to some extent	almost no
2 <input type="checkbox"/> short allowing short answers, prioritized, all time used	not all	main points	some	to important topics	some	partial	average	some correct	leading or cooperative	some
	almost all	all relevant points	many	to most topics + improvement	reasonable	good	many	many correct	quite efficient	reasonable
	efficiently	practically all points	practically all	improvement suggestions	very good	new crucial point(s)	almost all	+ improvement suggestions	very efficient	very good

NOTES:

REVIEWER

Start from 1 and add/subtract
 1 + + + - =

QUESTIONS ASKED		REVIEW OF REPORT		REVIEW OF OPPOSITION		ANSWERS TO JURY QUESTIONS				
	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	speech summary	discussion analysis	own opinions	pros & cons	prioritisation
0 <input type="checkbox"/> too few, mostly irrelevant	poor	almost no	too few	irrelevant	no	poor	almost no	too few	irrelevant	no
1 <input type="checkbox"/> some relevant, sufficient number, could clear things out	partial	too short/long	some	partially relevant	almost no	too short/long	too short/long	some	partially relevant	almost no
2 <input type="checkbox"/> most time used, many unclear points resolved, aimed at both rep. and opp.	good	relevant parts	many	mostly adequate	some	informative, apt	relevant parts	many	mostly adequate	some
3 <input type="checkbox"/> +short, apt and clear, well prioritized time managed efficiently	detailed, complex	accurately conclusive	+ improvement suggestions	adequate	good	brief but accurate	accurate, conclusive	+ improvement suggestions	fully adequate	good

NOTES:

SCORESHEET

REPORTER

1 + $5 + 3.5 - 0 = 9$

stage: *Final* fight (round no.): *Final* problem no.: *5*

reporter: *Suzanna* opponent: *Hagan* reviewer: *Dale*

Juror's name: *Suzanne*

signature: *Suzanne*

REPORT		DISCUSSION WITH OPPOSITION		DISCUSSION WITH REPORTER		ANSWERS TO JURY, OPONENT and REVIEWER'S QUESTIONS		
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency
0 almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 some	some	some	some	review of sources, cited	partly	only technical	some	avoided some
2 fair	fair	fair	not well fitting	some own input	average	points cleared	many	questions
3 good	good	well performed, sufficient number	deviations	some interesting results	interesting	some scientific	+ data/theory	cooperated well
4 detailed	quite detailed	+ results explained	qualitatively analysed	considerable experimental	solution	points cleared	convincingly supported	answered directly
5 demonstrative	correct	errors analysed	+ theory limits	or theoretical	some aspects	interesting points	proved deep	to most questions
6 deep and comprehensive, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	explained, conclusive	considerable experimental and theoretical	greater extent than expected	discussed	understanding	efficient, productive
			analysed, conclusive			brought in new physics		

NOTES:

OPONENT

1 + $1 + 2.5 + 1.5 - 0 = 6$

Start from 1 and add/subtract

QUESTIONS ASKED		OPPOSITION (SPEECH)				DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS					
0 almost no, irrelevant	1 some relevant, aimed at resolving some unclear points	time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation	scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation	concise and correct or no questions asked	0	1	2
0 almost no, irrelevant	some relevant, aimed at resolving some unclear points	almost no	almost nothing	no or irrelevant	almost no	no	almost no	irrelevant	very little	almost no	no	concise and correct or no questions asked	0	1	2
1 some relevant, aimed at resolving some unclear points	short allowing short answers, prioritized, all time used	very little	some main points	few	some	almost no	little	some	some	to some extent	almost no	some incorrect, inconclusive or too long	-1	-2	-3
2 short allowing short answers, prioritized, all time used		not all	main points	some	to important topics	some	partial	average	some correct	leading or cooperative	some	deeply incorrect or show deep misconceptions	-1	-2	-3
3 all & efficiently		almost all	all relevant points	many	to most topics	reasonable	good	many	many correct	quite efficient	reasonable		-1	-2	-3
4 all & efficiently		practically all points	practically all points	practically all	+ improvement suggestions	very good	new crucial point(s)	almost all	+ improvement suggestions	very efficient	very good		-1	-2	-3

NOTES:

REVIEWER

1 + $2 + 1.5 + 1.5 - 0 = 6$

Start from 1 and add/subtract

QUESTIONS ASKED		REVIEW OF REPORT				REVIEW OF OPPOSITION				ANSWERS TO JURY QUESTIONS					
0 too few, mostly irrelevant	1 some relevant, sufficient number, could clear things out	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	speech summary	discussion analysis	own opinions	pros & cons	prioritisation	concise and correct or no questions asked	0	1	2
0 too few, mostly irrelevant	some relevant, sufficient number, could clear things out	poor	almost no	too few	irrelevant	no	poor	almost no	too few	irrelevant	no	concise and correct or no questions asked	0	1	2
1 some relevant, sufficient number, could clear things out	most time used, many unclear points resolved, aimed at both rep. and opp.	partial	too short/long	some	partially relevant	almost no	too short/long	too short/long	some	partially relevant	almost no	some incorrect, inconclusive or too long	-1	-2	-3
2 resolved, aimed at both rep. and opp.		good	relevant parts	many	mostly adequate	some	informative, apt	relevant parts	many	mostly adequate	some	deeply incorrect or show deep misconceptions	-1	-2	-3
3 +short, apt and clear, well prioritized time managed efficiently		detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	good	brief but accurate	accurate, conclusive	+ improvement suggestions	fully adequate	good		-1	-2	-3

NOTES:

SCORESHEET

Juror's name: *PHIL O'NEILL*
signature: *PHO*

problem no.: *5*
room: *PO*
reviewer: *PO*

stage: *4*
fight (round no.): *FINAL*
opponent: *HUN*
reporter: *SING*

REPORTER
1 + *6* + *3* - *0* = *10*
Start from 1 and add/subtract

REPORT		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS	
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment
0 almost no	almost no	too few	no/almost no	others' data, incorrectly cited	misunderstood
1 some	some	some	some	review of sources, cited	partly
2 fair	fair	fair	not well fitting	some own input	average
3 good	good	well performed, sufficient number	deviations	some interesting results	interesting
4 detailed	quite detailed, correct	+ results explained	qualitatively analysed	considerable experimental or theoretical	solution
5 demonstrative	detailed, correct	+ errors analysed	+ theory limits	considerable experimental and theoretical	some aspects above average
6 deep and comprehensive, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	explained, concise, well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected

DISCUSSION WITH OPPONENT
scientific contribution: almost no, only technical points cleared, some scientific points cleared, interesting points discussed, brought in new physics
relevant arguments/responses: too few, some, many
efficiency: almost no, chaotic avoided some questions, cooperated well

ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS
0 concise and correct or no questions asked
-1 some incorrect, inconclusive or too long
-2 deeply incorrect or show deep misconceptions

NOTES:

OPPONENT
1 + *2* + *2 1/2* + *2 1/2* - *0* = *8*
Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	scientific contribution of topics	own opinions presented	efficiency	prioritisation
0 almost no, irrelevant	almost nothing	almost no	very little	almost no	no
1 some relevant, aimed at resolving some unclear points	some main points	some	some	to some extent	almost no
2 short allowing short answers, prioritized, all time used	main points	partial	some	leading or cooperative	some
	all relevant points	average	some correct	quite efficient	reasonable
	practically all points	many	many correct	very efficient	very good
	efficiently	almost all	+ improvement suggestions		

QUESTIONS ASKED
0 almost no, irrelevant
1 some relevant, aimed at resolving some unclear points
2 short allowing short answers, prioritized, all time used
3 all & efficiently

DISCUSSION WITH REPORTER
scientific contribution: almost no, little, partial, good, new crucial point(s)
own opinions presented: very little, some, some correct, many correct, + improvement suggestions
efficiency: almost no, to some extent, leading or cooperative, quite efficient, very efficient

ANSWERS TO JURY and REVIEWER'S QUESTIONS
0 concise and correct or no questions asked
-1 some incorrect, inconclusive or too long
-2 deeply incorrect or show deep misconceptions

NOTES:

REVIEWER
1 + *2 1/2* + *2 1/2* + *2* - *0* = *8*
Start from 1 and add/subtract

QUESTIONS ASKED		REVIEW OF REPORT		REVIEW OF OPPOSITION		ANSWERS TO JURY QUESTIONS	
time managed efficiently	resolved, aimed at both rep. and opp.	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	concise and correct or no questions asked
0 too few, mostly irrelevant	clear things out	poor	almost no	too few	irrelevant	no	no questions asked
1 some relevant, sufficient number, could clear things out	most time used, many unclear points	partial	too short/long	some	partially relevant	almost no	some incorrect, inconclusive or too long
2 resolved, aimed at both rep. and opp.	short, apt and clear, well prioritized	good	relevant parts	many	mostly adequate	some	deeply incorrect or show deep misconceptions
3 time managed efficiently		detailed, complex	accurate, conclusive	+ improvement suggestions	adequate	good	

QUESTIONS ASKED
0 too few, mostly irrelevant
1 some relevant, sufficient number, could clear things out
2 most time used, many unclear points resolved, aimed at both rep. and opp.
3 short, apt and clear, well prioritized, time managed efficiently

REVIEW OF REPORT
report summary & understanding: poor, partial, good, detailed, complex
discussion analysis: almost no, too short/long, relevant parts, accurate, conclusive
own opinions: too few, some, many, + improvement suggestions
pros & cons: irrelevant, partially relevant, mostly adequate, fully adequate
prioritisation: no, almost no, some, good

REVIEW OF OPPOSITION
speech summary: poor, too short/long, informative, apt, brief but accurate
discussion analysis: almost no, too short/long, accurate, conclusive
own opinions: too few, some, many, + improvement suggestions
pros & cons: irrelevant, partially relevant, mostly adequate, fully adequate
prioritisation: no, almost no, some, good

ANSWERS TO JURY QUESTIONS
0 concise and correct or no questions asked
-1 some incorrect, inconclusive or too long
-2 deeply incorrect or show deep misconceptions

NOTES:

SCORESHEET

stage: **4** fight (round no.): **Final** room: **5** problem no.: **5**
 reporter: **SUGARPORE** opponent: **HUNGARY** reviewer: **POUND** Juror's name: **T. O'ROURKE**
 signature: **T.O.**

REPORTER
 1 + **4.0** + **4** - **9** = **9**
 Start from 1 and add/subtract

REPORT		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS	
0	phenomenon explanation almost no	task fulfilment misunderstood	scientific contribution almost no	relevant arguments/responses too few	efficiency almost no, chaotic
1	some	partly	only technical points cleared	some	avoided some questions
2	fair	average	some scientific points cleared	many	cooperated well
3	good	interesting solution	interesting points discussed	+ data/theory convincingly supported	answered directly to most questions
4	detailed demonstrative	some aspects above average	brought in new physics	proved deep understanding	efficient, productive
5	deep and comprehensible, shows physical insight	greater extent than expected			
6	completely testable				

NOTES:

OPPONENT
 1 + **1** + **1** + **1** = **4**
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
0	almost no, irrelevant	scientific contribution almost no	relevance of topics irrelevant	own opinions presented very little	efficiency almost no
1	some relevant, aimed at resolving some unclear points	little	some	some correct	to some extent leading to cooperative
2	short allowing short answers, prioritized, all time used	partial	average	many correct	quite efficient
3		good	many	+ improvement suggestions	very efficient
4		new crucial point(s)	almost all		

NOTES:

REVIEWER
 1 + **0.8** + **2** + **2** = **6**
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH OPPONENT		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
0	too few, mostly irrelevant	speech summary poor	discussion analysis almost no	own opinions too few	efficiency almost no
1	some relevant sufficient number, could clear things-out	partial	too short/long	some	to some extent leading to cooperative
2	most time used, many unclear points resolved, aimed at both rep. and opp.	good	informative, apt	many	quite efficient
3	+short, apt and clear, well prioritized time managed efficiently	detailed, complex	brief but accurate	+ improvement suggestions	very efficient

NOTES:

SCORESHEET

stage: 4

fight (round no.): Final

problem no.: 5

Juror's name: Nirut

reporter: Singapore

opponent: Hungary

room: Poland

signature: Nuj

REPORTER Start from 1 and add/subtract

1 + 3.5 + 3.5 = 8

REPORT		phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	DISCUSSION WITH OPPONENT	ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS
0		almost no	almost no	too few	no/almost no	others' data, incorrectly cited	misunderstood	scientific contribution almost no	0
1		some	some	some	some	review of sources, cited	partly	relevant arguments/responses too few	0
2		fair	fair	fair	not well fitting	some own input	average	efficiency almost no, chaotic avoided some questions	0
3		good	good	well performed, sufficient number	deviations	some interesting results	interesting	many	-1
4		detailed	quite detailed, correct	+ results explained	quantitatively analysed	considerable experimental or theoretical	solution	+ data/theory convincingly supported	2
5		demonstrative	correct	errors analysed	+ theory limits explained, conclusive	considerable experimental and theoretical	some aspects above average	proved deep understanding	2
6		deep and comprehensive, shows physical insight	completely testable	convincing analysis	analysed, conclusive		greater extent than expected	efficient, productive	2

NOTES:

OPPONENT Start from 1 and add/subtract

1 + 1 + 2.5 + 2 = 7

QUESTIONS ASKED		time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation	DISCUSSION WITH REPORTER	ANSWERS TO JURY and REVIEWER'S QUESTIONS
0	almost no, irrelevant	almost no	almost nothing	no or irrelevant	almost no	no	scientific contribution almost no	0
1	some relevant, aimed at resolving some unclear points	very little	some main points	few	some	almost no	relevance of topics irrelevant	0
2	short allowing short answers, prioritized, all time used	not all	main points	some	to important topics	some	own opinions presented very little	1
3		almost all	all relevant points	many	to most topics	reasonable	relevance of topics some	1
4		all & efficiently	practically all points	practically all	+ improvement suggestions	very good	own opinions presented many correct	1

NOTES:

REVIEWER Start from 1 and add/subtract

1 + 1.5 + 2.5 + 2 = 7

QUESTIONS ASKED		report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	REVIEW OF OPPOSITION	ANSWERS TO JURY QUESTIONS
0	too few, mostly irrelevant	poor	almost no	too few	irrelevant	no	speech summary poor	0
1	some relevant, sufficient number, could clear things out	partial	too short/long	some	partially relevant	almost no	discussion analysis almost no	0
2	most time used, many unclear points resolved, aimed at both rep. and opp.	good	relevant parts	many	mostly adequate	some	too short/long	1
3	+short, apt and clear, well prioritized time managed efficiently	detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	good	unfounded, apt-relevant parts	1

NOTES:

SCORESHEET

stage: 3 fight (round no.): 5 room: FLUM problem no.: 3 Juror's name: T. OPATRY
 reporter: CHINA opponent: SINGAPORE reviewer: HUNGARY signature: T.O.

REPORTER

1 + 5 + 1.8 - 0.5 = 7

REPORT		DISCUSSION WITH OPPONENT		DISCUSSION WITH REPORTER		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS		
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency
0 almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 some	some	some	some	review of sources, cited	partly	only technical	some	avoided some questions
2 fair	fair	fair	not well fitting	some own input	average	some scientific	many	cooperated well
3 good	good	well performed, sufficient number	deviations	some interesting results	interesting solution	points cleared		
4 detailed demonstrative	quite detailed, correct	+ results explained	qualitatively analysed	considerable experimental or theoretical	some aspects above average	interesting points discussed	+ data/theory convincingly supported	answered directly to most questions
5 deep and comprehensible, shows-physical insight	detailed, complex, completely testable	errors analysed	+ theory limits explained, conclusive	considerable experimental and theoretical	greater extent than-expected	brought in new physics	proved deep understanding	efficient, productive
6		+ reproducible,	well fitting, deviations analysed, conclusive					

NOTES:

OPPONENT

Start from 1 and add/subtract

1 + 1 + 2.5 + 2.5 - 0 = 7

QUESTIONS ASKED		OPPOSITION (SPEECH)		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	scientific contribution of topics	own opinions presented	efficiency	prioritisation
0 almost no, irrelevant	almost nothing	no or irrelevant	almost no	almost no	very little	almost no	no
1 some relevant, aimed at resolving some unclear points	some main points	few	some	little	some	to some extent	almost no
2 short allowing short answers, prioritized, all time used	main points	some	to important topics	partial	some correct	leading or cooperative	some
	all relevant-points	many	to most topics + improvement	good	many correct	quite efficient	reasonable
	practically all points	practically all	suggestions	new crucial point(s)	+ improvement suggestions	very efficient	very good

NOTES:

REVIEWER

Start from 1 and add/subtract

1 + 1.8 + 2 + 2 - 0 = 7

QUESTIONS ASKED		REVIEW OF REPORT		REVIEW OF OPPOSITION		ANSWERS TO JURY QUESTIONS	
time used	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	speech summary	discussion analysis
0 too few, mostly irrelevant	poor	almost no	too few	irrelevant	no	poor	almost no
1 some relevant, sufficient number, could clear things out	partial	too short/long	some	partially relevant	almost no	too short/long	too short/long
2 most time used, many unclear points resolved, aimed at both rep. and opp.	good	relevant parts	many	mostly adequate	some	informative, apt	relevant parts
3 +short, apt and clear, well prioritized time managed efficiently	detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	good	brief but accurate	accurate, conclusive

NOTES:

SCORESHEET

REPORTER
 1 + 2.5 + 2.5 = 7

stage: 3
 fight (round no.): Final
 reporter: Singapore

room: 3
 reviewer: Hungary

Juror's name: Nirut
 signature: [Signature]

REPORT		DISCUSSION WITH OPPOSITION		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS		
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency
0 almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 some	some	some	some	review of sources, cited	partly	only technical	some	avoided some
2 fair	fair	fair	not well fitting	some own input	average	points cleared	many	questions cooperated well
3 good	good	well performed, sufficient number	deviations	some interesting results	interesting solution	points cleared		
4 detailed	quite detailed, correct	+ results explained	qualitatively analysed	considerable experimental or theoretical	some aspects above average	interesting points discussed	+ data/theory convincingly supported	answered directly to most questions
5 demonstrative	correct	errors analysed	+ theory limits explained, conclusive	considerable experimental and theoretical	greater extent than expected	brought in new physics	proved deep understanding	efficient, productive
6 deep and comprehensive, shows physical insight	completely testable	convincing analysis	well fitting, deviations analysed, conclusive					

NOTES:

OPPONENT

Start from 1 and add/subtract
 1 + 1.5 + 2.5 + 2 = 7

QUESTIONS ASKED		DISCUSSION WITH REPORTER		DISCUSSION WITH OPPOSITION		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	scientific contribution of topics	own opinions presented	efficiency	prioritisation
0 almost no	almost nothing	no or irrelevant	almost no	almost no	very little	almost no	no
1 very little	some main points	few	some	almost no	some	to some extent	almost no
2 not all	main points	some	to important topics	partial	average	leading or cooperative	some
3 almost all	all relevant points	many	to most topics + improvement suggestions	good	many correct	quite efficient	reasonable
4 all & efficiently	practically all points	practically all		new crucial point(s)	+ improvement suggestions	very efficient	very good

NOTES:

REVIEWER

Start from 1 and add/subtract
 1 + 1.5 + 1.5 + 1.5 = 6

QUESTIONS ASKED		DISCUSSION WITH REPORTER		DISCUSSION WITH OPPOSITION		ANSWERS TO JURY QUESTIONS	
time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	scientific contribution of topics	own opinions presented	efficiency	prioritisation
0 too few, mostly irrelevant	poor	almost no	irrelevant	almost no	too few	almost no, chaotic	no
1 some relevant, sufficient number, could clear things out	partial	some	partially relevant	almost no	some	avoided some questions	no
2 most time used, many unclear points resolved, aimed at both rep. and opp.	good	relevant parts	mostly adequate	too short/long	some	cooperated well	no
3 +short, apt and clear, well prioritized time managed efficiently	detailed, complex	accurate, conclusive	fully adequate	informative, apt relevant parts	many	answered directly to most questions	no

NOTES:

SCORESHEET

Juror's name: *PHIL O'NEILL*
signature: *Agg Mill*

stage: *3* problem no.: *3*
reporter: *CHINA* room: *HONG*
opponent: *SINGAPORE* reviewer: *HONG*

Start from 1 and add/subtract
1 + *5* + *3* - *1* = *8*

REPORT				DISCUSSION WITH OPPONENT				ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS			
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency	0	1	2
almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic	0	1	2
some	some	some	some	review of sources, cited	partly	only technical	some	avoided some			
fair	fair	fair	not well fitting	some own input	average	some scientific	many	questions			
good	good	well performed,	deviations	some interesting results	interesting	points cleared		cooperated well			
detailed	quite detailed,	sufficient number	qualitatively analysed	considerable experimental	solution	interesting points	+ data/theory	answered directly			
demonstrative	correct	+ results explained	+ theory limits	or theoretical	some aspects	discussed	convincingly supported	to most questions			
deep and comprehensible,	detailed, complex,	errors analysed	explained, conclusive	considerable experimental	above average	brought in new	proved deep	efficient,			
shows physical insight	completely testable	convincing analysis	analysed, conclusive	and theoretical	greater extent	physics	understanding	productive			

NOTES:

OPPONENT

Start from 1 and add/subtract
1 + *2* + *3* + *2.5* - *1.5* = *8*

QUESTIONS ASKED				DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS			
0	1	2	3	scientific contribution	relevance of topics	own opinions presented	efficiency	0	1	2	
almost no, irrelevant	almost no	very little	not all	almost no	irrelevant	very little	almost no	concise and correct or no			
some relevant, aimed at resolving	some main points	main points	some	little	some	some	to some extent	questions asked			
some unclear points	all relevant points	all relevant points	to important topics	partial	average	some correct	almost no	some incorrect,			
short allowing short answers, prioritized, all time used	efficiently	practically all points	to most topics + improvement	good	many	many correct	quite efficient	inconclusive or too long			
			improvement suggestions	new crucial point(s)	almost all	+ improvement suggestions	very efficient	deeply incorrect or show deep misconceptions			

NOTES:

REVIEWER

Start from 1 and add/subtract
1 + *1* + *2* + *2* - *0* = *6*

QUESTIONS ASKED				REVIEW OF OPPOSITION				ANSWERS TO JURY QUESTIONS			
0	1	2	3	speech summary	discussion analysis	own opinions	pros & cons	0	1	2	
too few, mostly irrelevant	poor	partial	irrelevant	poor	almost no	too few	irrelevant	concise and correct or no			
some relevant, sufficient number, could clear things out	good	good	partially relevant	too short/long	almost no	some	partially relevant	some incorrect,			
most time used, many unclear points resolved, aimed at both rep. and opp.	detailed, complex	relevant parts	mostly adequate	informative, apt	too short/long	many	mostly adequate	inconclusive or too long			
+short, apt and clear, well prioritized time managed efficiently		accurate, conclusive	adequate	brief but accurate	relevant parts	+ improvement suggestions	adequate	deeply incorrect or show deep misconceptions			

NOTES:

SCORESHEET

stage: 3 fight (round no.): Final room: 3 problem no.: 3
 reporter: Ching opponent: Singapore reviewer: Hungary signature: SEE NAME

REPORTER 4 Start from 1 and add/subtract
 1 + 1.5 + 0 - 0 = 0

REPORT		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS				
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	arguments/responses	efficiency
0 almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 some	some	some	some	review of sources, cited	partly	only technical	some	avoided some questions
2 fair	fair	fair	not well fitting	some own input	average	points cleared	many	cooperated well
3 good	good	well performed, sufficient number	deviations	some interesting results	interesting	some scientific		
4 detailed	quite detailed, correct	+ results explained	qualitatively analysed	considerable experimental or theoretical	some aspects above average	points cleared		
5 demonstrative	correct	errors analysed	+ theory limits	considerable experimental and theoretical	greater extent than expected	interesting points discussed		
6 deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	explained, conclusive well fitting, deviations analysed, conclusive			brought in new physics		

NOTES:

OPPONENT 2.5 Start from 1 and add/subtract
 1 + 1.5 + 2 - 0 = 7

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
almost no, irrelevant	time used	relevance of topics	own opinions presented	efficiency	concise and correct or no questions asked
0 almost no, irrelevant	almost no	irrelevant	very little	almost no	0
1 some relevant, aimed at resolving some unclear points	very little	some	some	to some extent	1
2 short allowing short answers, prioritized, all time used	not all	average	some correct	leading or cooperative	-1
	almost all	many	many correct	quite efficient	-2
	efficiently	practically all	+ improvement suggestions	very efficient	

NOTES:

REVIEWER 1.5 Start from 1 and add/subtract
 1 + 1.5 + 2 - 0 = 6

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
too few, mostly irrelevant	time used	relevance of topics	own opinions presented	efficiency	concise and correct or no questions asked
0 too few, mostly irrelevant	almost no	irrelevant	very little	almost no	0
1 some relevant, sufficient number, could clear things out	very little	some	some	to some extent	1
2 most time used, many unclear points resolved, aimed at both rep. and opp.	not all	average	some correct	leading or cooperative	-1
3 +short, apt and clear, well prioritized time managed efficiently	almost all	many	many correct	quite efficient	-2
	efficiently	practically all	+ improvement suggestions	very efficient	

NOTES:

SCORESHEET

REPORTER

1 + + - =

stage: fight (round no.): room: problem no.:

Juror's name: signature:

reporter: opponent: reviewer:

REPORT		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS	
0	phenomenon explanation almost no	comparison between theory and experiment no/ almost no	own contribution others' data, incorrectly cited	task fulfilment misunderstood	efficiency almost no, chaotic
1	some	some	review of sources, cited	partly	avoided some
2	fair	not well fitting deviations	some own input	average	questions
3	good	qualitatively analysed	some interesting results	interesting solution	cooperated well
4	detailed, demonstrative	+ theory limits explained, conclusive	considerable experimental or theoretical	some aspects above average	answered directly
5	deep and comprehensible, shows physical insight	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	to most questions efficient, productive
6					

NOTES:

OPPONENT

Start from 1 and add/subtract

1 + + + - =

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
0	almost no, irrelevant	scientific contribution of topics almost no	relevance of topics irrelevant	own opinions presented very little	efficiency almost no
1	some relevant, aimed at resolving some unclear points	little	some	some correct	to some extent
2	short allowing short answers, prioritized, all time used	partial	average	many correct	leading & cooperative
3		good	many	many correct	quite efficient
4		new crucial point(s)	almost all	+ improvement suggestions	very efficient
5					
6					

NOTES:

REVIEWER

Start from 1 and add/subtract

1 + + + - =

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
0	too few, mostly irrelevant	scientific contribution of topics almost no	relevance of topics irrelevant	own opinions presented very little	efficiency almost no
1	some relevant, sufficient number, could clear things out	little	some	some correct	to some extent
2	most time used, many unclear points resolved, aimed at both rep. and opp.	partial	average	many correct	leading & cooperative
3	+short, apt and clear, well prioritized time managed efficiently	good	many	many correct	quite efficient
4		new crucial point(s)	almost all	+ improvement suggestions	very efficient
5					
6					

NOTES:

SCORESHEET

REPORTER

1 + 4 + 2.5 - 0 = 7

stage: 3

reporter: Chua

fight (round no.): FINAL

opponent: Singapore

room: 3

problem no.: 3

Juror's name: J. BALCOMBE

signature: *J.Balcombe*

REPORT	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	DISCUSSION WITH OPPONENT	ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	scientific contribution almost no	0
1	some	some	some	some	review of sources, cited	partly	relevant arguments/responses too few	1
2	fair	fair	fair	not well fitting	some own input	average	efficiency almost no, chaotic	2
3	good	good	well performed, sufficient number	deviations	some interesting results	interesting	avoided some questions	3
4	detailed	quite detailed, correct	+ results explained	qualitatively analysed + theory limits	considerable experimental or theoretical	solution	cooperated well	4
5	demonstrative	deep and comprehensible, detailed, complex, completely testable	errors analysed + reproducible, convincing analysis	explained, conclusive, well fitting, deviations analysed, conclusive	considerable experimental and theoretical	some aspects above average	answered directly to most questions	5
6	shows physical insight					greater extent than expected	efficient, productive	6

NOTES:

OPPONENT

1 + 2 + 3 + 2.5 - 0 = 8

Start from 1 and add/subtract

QUESTIONS ASKED	time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation	DISCUSSION WITH REPORTER	ANSWERS TO JURY and REVIEWER'S QUESTIONS
0	almost no	almost nothing	no or irrelevant	almost no	no	scientific contribution almost no	0
1	very little	some main points	few	some	almost no	little	1
2	not all	main points	some	to important topics	some	partial	2
3	almost all	all relevant points	many	to most topics + improvement suggestions	reasonable	good	3
4	all & efficiently	practically all points	practically all		very good	new-ethical point(s)	4

NOTES:

Concentrated too much on some aspects - not enough on others.

REVIEWER

1 + 1.5 + 1.5 + 2 - 0 = 6

Start from 1 and add/subtract

QUESTIONS ASKED	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	REVIEW OF OPPOSITION	ANSWERS TO JURY QUESTIONS
0	too few, mostly irrelevant	almost no	too few	irrelevant	no	speech summary poor	0
1	some relevant, sufficient number, could clear things out	too short/long	some	partially relevant	almost no	poor	1
2	most time used, many unclear points resolved, aimed at both rep. and opp.	relevant parts	many	mostly adequate	some	too short/long	2
3	+short, apt and clear, well prioritized time managed efficiently	accurate, conclusive	+ improvement suggestions	fully adequate	good	informative, apt relevant parts	3

NOTES:

SCORESHEET

Juror's name: E. ESCHENBACH
signature: [Signature]

problem no.: _____

room: _____

fight (round no.): FINAL
opponent: SINGAPORE
reporter: CHINA
reviewer: HUNGARY

stage: 3

Start from 1 and add/subtract
1 + 5.7 + 2.8 - 0 = 9.5

REPORT		DISCUSSION WITH OPPONENT		DISCUSSION WITH REPORTER		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS		
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency
0 almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 some	some	some	some	review of sources, cited	partly	only technical	some	avoided some questions
2 fair	fair	fair	not well fitting	some own input	average	points cleared	many	cooperated well
3 good	good	well performed, sufficient-number	qualitatively analysed	some interesting results	interesting solution	points cleared	many	cooperated well
4 detailed demonstrative	quite detailed, correct	+ results explained	+ theory limits explained, conclusive	considerable experimental or theoretical	some aspects above average	interesting points discussed	+ data/theory convincingly supported	answered directly to most questions
5 deep and comprehensive	detailed, complex, completely testable	errors analysed	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	brought in new physics	proved deep understanding	efficient, productive
6 shows physical insight	completely testable	convincing analysis						

NOTES: 6 6.0 5.5 6.0 6.0 6.0 5 9 2.8 2.8 2.7 2.8 2.7

Error but

QUESTIONS ASKED		OPPOSITION (SPEECH)		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	scientific contribution of topics	own opinions presented	efficiency	efficiency
0 almost no	almost nothing	no or irrelevant	almost no	almost no	very little	almost no	almost no
1 very little	some main points	few	some	almost no	some	to some extent	almost no
2 not all	main points	some	to important topics	some	some correct	leading or cooperative	some
3 almost all	all relevant points	many	to most topics + improvement suggestions	good	many correct	quite efficient	reasonable
4 all & efficiently	practically all points	practically all		new crucial point(s)	+ improvement suggestions	very efficient	very good

NOTES: 1.4 3.78 + 3.4 - 0 = 9.58

3.8 4.0 3.8 3.8 3.8 3.8 3.5 3.5 3.5 3.2 3.5

no destructive emit, optimization of Puride sue. it not very convincing but why?

QUESTIONS ASKED		REVIEW OF REPORT		REVIEW OF OPPOSITION		ANSWERS TO JURY QUESTIONS	
too few, mostly irrelevant	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	concise and correct or no questions asked	concise and correct or no questions asked
0 too few, mostly irrelevant	poor	almost no	too few	irrelevant	no	no questions asked	no questions asked
1 some relevant, sufficient number, could clear things out	partial	almost no	some	partially relevant	almost no	some incorrect, inconclusive or too long	some incorrect, inconclusive or too long
2 most time used, many unclear points resolved, aimed at both rep. and opp.	good	to short/long	many	mostly adequate	some	deeply incorrect or show deep misconceptions	deeply incorrect or show deep misconceptions
3 +short, apt and clear, well prioritized time managed efficiently	detailed, complex	accurate, conclusive	+ improvement suggestions	adequate	good		

NOTES: 1.2 2.5 2 2.5 1.5 2 2.0 2.0 2.0 1.8 1.8 2

SCORESHEET

stage: 3 fight (round no.): Final room: 3 problem no.: 3 Juror's name: Mathias Abo
 reporter: China opponent: Singapore reviewer: Hungary signature: A

REPORTER
 1 + 4.5 + 3.5 - 0 = 9
 Start from 1 and add/subtract

REPORT		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS		
0	phenomenon explanation almost no	comparison between theory and experiment no/ almost no	task fulfilment misunderstood	scientific contribution almost no	relevant arguments/responses too few	efficiency almost no, chaotic
1	some	some	partly	only technical points cleared	some	avoided some questions
2	fair	not well fitting	average	some scientific points cleared	many	cooperated well
3	good	qualitatively analysed	interesting solution	interesting points discussed	+ data/theory convincingly supported	answered directly to most questions
4	detailed, demonstrative	+ theory limits explained, conclusive	some aspects above average	brought in new physics	proved deep understanding	efficient, productive
5	quite detailed, correct	well fitting, deviations analysed, conclusive	greater extent than expected			
6	deep and comprehensible, shows physical insight	completely testable				

NOTES: *Impressive no deling, really well understood, phenomenon*

OPPONENT
 1 + 1.5 + 3.5 + 2.5 - 0 = 8
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS		
0	almost no, irrelevant	scientific contribution of topics almost no	relevance of topics irrelevant	own opinions presented very little	efficiency almost no	concise and correct or no questions asked
1	some relevant, aimed at resolving some unclear points	some	some	some correct	to some extent	some incorrect, inconclusive or too long
2	short allowing short answers, prioritized, all time used	many	average	many correct	leading or cooperative	deeply incorrect or show deep misconceptions
3	all & efficiently	practically all points	many	many correct	quite efficient	
4			new crucial point(s)	+ improvement suggestions	very efficient	

NOTES: *Focused too much on few topics*

REVIEWER
 1 + 1.75 + 2.5 + 2 - 0 = 7
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH OPPONENT		ANSWERS TO JURY and REVIEWER'S QUESTIONS		
0	too few, mostly irrelevant	speech summary poor	discussion analysis almost no	own opinions too few	pros & cons irrelevant	concise and correct or no questions asked
1	some relevant, sufficient number, could clear things out	partial	too short/long	some	partially relevant	some incorrect, inconclusive or too long
2	most time used, many unclear points resolved, aimed at both rep. and opp.	good	relevant parts	many	mostly adequate	deeply incorrect or show deep misconceptions
3	+short, apt and clear, well prioritized time managed efficiently	detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	

NOTES:

SCORESHEET

REPORTER

Start from 1 and add/subtract

$$1 + 3.5 + 2 - 0 = 6.5$$

$$6.5 - 7.7 = -1.2$$

stage: 3

reporter:

fight (round no.): Final

opponent:

room:

reviewer:

problem no.:

signature:

Juror's name:

Hong Jung

REPORT

	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency	ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS
0	almost no	almost no	too few	no/almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic	0
1	some	some	some	some	review of sources, cited	partly	only technical	some	avoided some	1
2	fair	fair	fair	not well fitting	some own input	average	points cleared	many	questions	2
3	good	good	well performed, sufficient number	deviations	some interesting results	interesting solution	some scientific	many	cooperated well	3
4	detailed	quite detailed, correct	+ results explained errors analysed	qualitatively analysed + theory limits	considerable experimental or theoretical	some aspects above average	interesting points discussed	+ data/theory convincingly supported	answered directly to most questions	4
5	demonstrative	deep and comprehensible, detailed, complex, completely testable	+ reproducible, convincing analysis	explained, deviations well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	brought in new physics	proved deep understanding	efficient, productive	5
6	shows physical insight									6

NOTES:

OPPONENT

Start from 1 and add/subtract

$$1 + 2 + 3 + 2 - 0 = 8$$

QUESTIONS ASKED

- 0 almost no, irrelevant
- 1 some relevant, aimed at resolving some unclear points
- 2 short allowing short answers, prioritized, all time used

NOTES:

POSITION (SPEECH)

time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation
0	almost no	no or irrelevant	almost no	no
1	very little	few	some	almost no
2	not all	some	to important topics	some
3	almost all	many	to most topics + improvement suggestions	reasonable
4	efficiently	practically all		very good

DISCUSSION WITH REPORTER

scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation	ANSWERS TO JURY and REVIEWER'S QUESTIONS
0	almost no	very little	almost no	no	0
1	little	some	to some extent	almost no	1
2	partial	some correct	leading or cooperative	some	2
3	good	many correct	quite efficient	reasonable	3
4	new crucial point(s)	+ improvement suggestions	very efficient	very good	4

REVIEWER

Start from 1 and add/subtract

$$1 + 2 + 1.5 + 1.5 - 0 = 6$$

QUESTIONS ASKED

- 0 too few, mostly irrelevant
- 1 some relevant, sufficient number, could clear things out
- 2 most time used, many unclear points resolved, aimed at both rep. and opp.
- 3 +short, apt and clear, well prioritized time managed efficiently

NOTES:

REVIEW OF REPORT

report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation
0	poor	too few	irrelevant	no
1	partial	some	partially relevant	almost no
2	good	many	mostly adequate	some
3	detailed, complex	+ improvement suggestions	fully adequate	good

REVIEW OF OPPOSITION

speech summary	discussion analysis	own opinions	pros & cons	prioritisation
0	poor	too few	irrelevant	no
1	too short/long	some	partially relevant	almost no
2	informative, apt	many	mostly adequate	some
3	brief but accurate	+ improvement suggestions	fully adequate	good

ANSWERS TO JURY QUESTIONS

0	concise and correct or no questions asked
1	some incorrect, inconclusive or too long
2	deeply incorrect or show deep misconceptions

SCORESHEET

stage: B fight (round no.): 6 room: B problem no.: B Juror's name: D. Miller
 reporter: China opponent: Singapore reviewer: Hingray signature: Miller

REPORTER
 1 + 5 + 2 - 0 = 8
 Start from 1 and add/subtract

REPORT		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS	
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment
0 almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood
1 some	some	some	some	review of sources, cited	partly
2 fair	fair	fair	not well fitting	some own input	average
3 good	good	well performed, sufficient number	deviations	some interesting results	interesting solution
4 detailed	quite detailed, correct	+ results explained	qualitatively analysed	considerable experimental or theoretical	+ some aspects above average
5 demonstrative	+ correct	+ errors analysed	+ theory limits	considerable experimental and theoretical	+ greater extent than expected
6 deep and comprehensible, shows physical insight	completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive		

NOTES:

OPPONENT
 1 + 2 + 3 + 3 - 0 = 9
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	scientific contribution of topics	relevance of topics	own opinions presented	efficiency
0 almost no, irrelevant	almost nothing	almost no	irrelevant	very little	almost no
1 some relevant, aimed at resolving some unclear points	some main points	very little	no or irrelevant	some	to some extent
2 short allowing short answers, prioritized, all time used	main points	not all	few	some correct	almost no
	+ all relevant points	almost all	many	many correct	some
	practically all points	efficiently	practically all	+ improvement suggestions	reasonable
				+ improvement suggestions	very good

NOTES:

REVIEWER
 1 + 2 + 2 - 0 = 7
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH OPPONENT		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	scientific contribution of topics	relevance of topics	own opinions presented	efficiency
0 too few, mostly irrelevant	almost nothing	almost no	irrelevant	very little	almost no
1 some relevant, sufficient number, could clear things out	some main points	very little	no or irrelevant	some	to some extent
2 most time used, many unclear points resolved, aimed at both rep. and opp.	main points	not all	few	some correct	almost no
3 +short, apt and clear, well prioritized time managed efficiently	+ all relevant points	almost all	many	many correct	some
	practically all points	efficiently	practically all	+ improvement suggestions	reasonable
				+ improvement suggestions	very good

NOTES:

SCORESHEET

REPORTER: $1 + 35 + 35 = 8$
 Start from 1 and add/subtract

stage: M
 fight (round no.): F
 reporter: CHN
 opponent: SIN

room:
 reviewer: HW

Juror's name: PASHA
 signature:

REPORT		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS	
0	phenomenon explanation almost no	comparison between theory and experiment no/ almost no	own contribution others' data, incorrectly cited	task fulfilment misunderstood	efficiency almost no, chaotic
1	some	some	review of sources, cited	partly	avoided some
2	fair	not well fitting	some own input	average	questions asked
3	well performed, sufficient number	deviations qualitatively analysed	some interesting results	interesting solution	cooperated well
4	+ results explained	+ theory limits	considerable experimental or theoretical	some aspects above average	answered directly
5	errors analysed	explained, conclusive	considerable experimental and theoretical	greater extent than expected	to most questions
6	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive			efficient, productive

NOTES:

discussion

OPPONENT

1 + 1 + 2.5 + 2.5 = 7
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
0	almost no, irrelevant	scientific contribution almost no	relevance of topics irrelevant	own opinions very little	efficiency almost no
1	some relevant, aimed at resolving	1	some	some	to some extent
2	some unclear points	2	partial	some correct	leading or cooperative
3	short allowing short answers, prioritized, all time used	3	good	many correct	quite efficient
4		4	new crucial point(s)	+ improvement suggestions	very efficient

NOTES:

REVIEWER

1 + 2.5 + 1.5 + 1 = 5
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
0	too few, mostly irrelevant	report summary & understanding poor	discussion analysis almost no	own opinions too few	efficiency almost no
1	some relevant, sufficient number, could clear things out	1	too short/long	some	to some extent
2	most time used, many unclear points resolved, aimed at both rep. and opp.	2	relevant parts	many	leading or cooperative
3	+short, apt and clear, well prioritized time managed efficiently	3	accurate, conclusive	+ improvement suggestions	quite efficient

NOTES:

SCORESHEET

REPORTER Start from 1 and add/subtract
 1 + 3.5 + 2 = 7
 stage: 2 fight (round no.): Final
 reporter: Poland opponent: China
 room: 17 problem no.:
 reviewer: Singapore
 Juror's name: Niynt
 signature: Niynt

REPORT		DISCUSSION WITH OPPOSITION		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS		
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency
0 almost no	almost no	too few	no/almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 some	some	some	some	review of sources, cited	partly	only technical	some	avoided some
2 fair	fair	fair	not well fitting	some own input	average	points cleared	many	questions
3 good	good	well performed, sufficient	deviations	some interesting results	interesting	some scientific	many	cooperated well
4 detailed demonstrative	quite detailed, correct	+ results explained	qualitatively analysed	considerable experimental or theoretical	solution	interesting points discussed	+ data/theory convincingly supported	answered directly to most questions
5 deep and comprehensive, shows physical insight	detailed, complex, completely testable	errors analysed	+ theory limits explained, conclusive	considerable experimental and theoretical	some aspects above average	brought in new physics	proved deep understanding	efficient, productive
6		+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive		greater extent than expected			

NOTES: $P_{vac} = P_{drop}$ Why P_0 and β still in last eq. of motion?

OPPOSITION (SPEECH)		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	relevance of topics	own opinions presented	efficiency	prioritisation
0 almost no	almost nothing	no or irrelevant	very little	almost no	no
1 very little	some main points	few	some	to some extent	almost no
2 not all	main points	some	partial	leading or cooperative	some
3 almost all	all relevant points	many	good	quite efficient	reasonable
4 all & efficiently	practically all points	practically all	new crucial point(s)	+ improvement suggestions	very good

QUESTIONS ASKED		REVIEW OF OPPOSITION		ANSWERS TO JURY QUESTIONS	
almost no, irrelevant	report summary & understanding	speech summary	discussion analysis	own opinions	pros & cons
0	poor	poor	almost no	too few	irrelevant
1	partial	too short/long	too short/long	some	partially relevant
2	good	relevant parts	relevant parts	many	mostly adequate
3	detailed, complex	accurate, conclusive	accurate, conclusive	+ improvement suggestions	adequate
4					good

NOTES:

REVIEWER		DISCUSSION WITH OPPOSITION		ANSWERS TO JURY QUESTIONS	
almost no, irrelevant	report summary & understanding	speech summary	discussion analysis	own opinions	pros & cons
0	poor	poor	almost no	too few	irrelevant
1	partial	too short/long	too short/long	some	partially relevant
2	good	relevant parts	relevant parts	many	mostly adequate
3	detailed, complex	accurate, conclusive	accurate, conclusive	+ improvement suggestions	adequate
4					good

NOTES:

REPORTER		DISCUSSION WITH OPPOSITION		ANSWERS TO JURY QUESTIONS	
almost no, irrelevant	report summary & understanding	speech summary	discussion analysis	own opinions	pros & cons
0	poor	poor	almost no	too few	irrelevant
1	partial	too short/long	too short/long	some	partially relevant
2	good	relevant parts	relevant parts	many	mostly adequate
3	detailed, complex	accurate, conclusive	accurate, conclusive	+ improvement suggestions	adequate
4					good

NOTES:

SCORESHEET

Juror's name: T. OPATRYK
signature: T.O.

problem no.: 17
room: 17
reviewer: SUGARPORE

stage: 2
fight (round no.): FINAL
opponent: CHINA
reporter: POLAND

REPORTER
1 + 4.5 + 2.5 - 8 = 8
Start from 1 and add/subtract

REPORT		DISCUSSION WITH OPPONENT		DISCUSSION WITH REPORTER		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS		
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	scientific contribution	relevant arguments/responses	efficiency
0 almost no	almost no	too few	no/almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 some	some	some	some	review of sources, cited	partly	only technical	some	avoided some questions
2 fair	fair	fair	not well fitting	some own input	average	points cleared	many	cooperated well
3 good	good	well performed, sufficient number	deviations	some interesting results	interesting	some scientific		
4 detailed demonstrative	quite detailed, correct	+ results explained errors analysed	+ theory limits explained, conclusive	considerable experimental or theoretical	some aspects above average	interesting points discussed	+ data/theory convincingly supported	answered directly to most questions
5 deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	brought in new physics	proved deep understanding	efficient, productive
6								

NOTES:

OPPONENT
1 + 1 + 2.5 + 2 = 7
Start from 1 and add/subtract

QUESTIONS ASKED		OPPOSITION (SPEECH)		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	scientific contribution of topics	own opinions presented	efficiency	prioritisation
0 almost no	almost nothing	no or irrelevant	almost no	almost no	very little	almost no	no
1 very little	some main points	few	some	little	some	to some extent	almost no
2 not all	main points	some	to important topics	partial	some correct	leading or cooperative	some
3 almost all	all relevant points	many	to most topics + improvement	good	many correct	quite efficient	reasonable
4 all & efficiently	practically all points	practically all	suggestions	new crucial point(s)	+ improvement suggestions	very efficient	very good

NOTES:

REVIEWER
1 + 2.5 + 2.6 - 9 = 9
Start from 1 and add/subtract

QUESTIONS ASKED		REVIEW OF REPORT		REVIEW OF OPPOSITION		ANSWERS TO JURY QUESTIONS	
time used	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	speech summary	discussion analysis
0 too few, mostly irrelevant	poor	almost no	too few	irrelevant	no	poor	almost no
1 some relevant, sufficient number, clear things out	partial	too short/long	some	partially relevant	almost no	too short/long	too short/long
2 most time used, resolved, aimed at both rep. and opp.	good	relevant parts	many	mostly adequate	some	informative, app. relevant parts	some
3 +short, apt and clear, time managed efficiently	detailed complex	accurate, conclusive	+ improvement suggestions	fully adequate	good	brief but accurate	accurate, conclusive

NOTES:

SCORESHEET

stage: 2 fight (round no.): FINAL room: 17 problem no.: 17 Juror's name: PHIL O'NEILL
 reporter: POLAND opponent: CHINA reviewer: SINGAPORE signature: PHO HUI

REPORTER
 1 + 2 + 2 - 1 = 4
 Start from 1 and add/subtract

REPORT	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	DISCUSSION WITH OPPONENT	efficiency	ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	scientific contribution	almost no, chaotic	0
1	some	some	some	some	review of sources, cited	partly	relevant arguments/responses	avoided some questions	1
2	fair	fair	fair	not well-fitting	some own input	average	some scientific	cooperated well	2
3	good	good	well performed, sufficient number	deviations qualitatively analysed	some interesting results	interesting solution	many	answered directly to most questions	3
4	detailed	quite detailed	+ results explained	+ theory limits	considerable experimental or theoretical	some aspects	+ data/theory	efficient, productive	4
5	demonstrative	correct	errors analysed	explained, conclusive	considerable experimental and theoretical	greater extent	convincingly supported		
6	deep and comprehensive, shows physical insight	detailed, complex, completely testable	convincing analysis	analysed, conclusive		than expected	proved deep understanding		

NOTES:

OPPONENT
 1 + 1 + 2 + 2 - 0 = 6
 Start from 1 and add/subtract

QUESTIONS ASKED	time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation	DISCUSSION WITH REPORTER	efficiency	ANSWERS TO JURY and REVIEWER'S QUESTIONS
0	almost no	almost nothing	no or irrelevant	almost no	no	scientific contribution	almost no	0
1	very little	some main points	few	some	almost no	little	to some extent	1
2	not all	. main points	some	to important topics	some	partial	reading or cooperative	2
3	almost all	all relevant points	many	to most topics	reasonable	good	quite efficient	3
4	efficiently all &	practically all points	practically all	+ improvement suggestions	very good	new crucial point(s)	very efficient	4

NOTES:

REVIEWER
 1 + 1 + 2 + 2 - 0 = 6
 Start from 1 and add/subtract

QUESTIONS ASKED	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	REVIEW OF OPPOSITION	pros & cons	ANSWERS TO JURY QUESTIONS
0	too few, mostly irrelevant	almost no	too few	irrelevant	no	speech summary	irrelevant	0
1	some relevant, sufficient number, could clear things out	too short/long	some	partially relevant	almost no	poor	partially relevant	1
2	most time used, many unclear points resolved, aimed at both rep. and opp.	relevant parts	many	mostly adequate	some	too short/long	mostly adequate	2
3	+short, apt and clear, well prioritized time managed efficiently	accurate, conclusive	+ improvement suggestions	fully adequate	good	informative, apt	fully adequate	3

NOTES:

DO NOT ALLOW TIME TO ANSWER QUESTIONS

SCORESHEET

REPORTER: N.A. Start from 1 and add/subtract

1 + 2.5 + 2.5 = 7.5

stage: 2 fight (round no.): FINAL

reporter: Polad opponent: Chino

room: Supreme problem no.: 17

reviewer: Supreme signature: SUE NARISK

Juror's name: SUE NARISK
signature: SUE NARISK

REPORT		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS							
0	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	scientific contribution	relevant arguments/responses	efficiency	0	concise and correct or no questions asked
1	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic	-1	some incorrect,
2	some	some	some	some	review of sources, cited	partly	only technical	some	avoided some	-2	inconclusive or too long
3	fair	fair	fair	not well fitting	some own input	average	points cleared	many	questions		deeply incorrect or show
4	good	good	well performed, sufficient number	deviations	some interesting results	interesting	points cleared		cooperated well		deep misconceptions
5	detailed	quite detailed, correct	+ results explained	qualitatively analysed	considerable experimental	some aspects	interesting points	+ data/theory	answered directly		
6	demonstrative	correct	errors analysed	+ theory limits	or theoretical	above average	discussed	convincingly supported	to most questions		
	deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	explained, conclusive	considerable experimental and theoretical	greater extent than expected	brought in new physics	proved deep understanding	efficient, productive		

NOTES:

OPPONENT Start from 1 and add/subtract

1 + 1 + 2.5 - 0 = 4

QUESTIONS ASKED		OPPOSITION (SPEECH)		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
0	almost no, irrelevant	time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation	concise and correct or no questions asked
1	some relevant, aimed at resolving some unclear points	almost no	almost nothing	no or irrelevant	almost no	no	some incorrect,
2	short allowing short answers, prioritized, all time used	very little	some main points	few	some	almost no	inconclusive or too long
		not all	main points	some	to important topics	to some extent	deeply incorrect or show deep misconceptions
		almost all	all relevant points	many	to most topics	leading or cooperative	
		efficiently	practically all points	practically all	+ improvement suggestions	quite efficient	
						reasonable	
						very good	
						very good	

NOTES:

REVIEWER Start from 1 and add/subtract

1 + 0.5 + 2 + 1.5 - 0 = 4.5

QUESTIONS ASKED		OPPOSITION (SPEECH)		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
0	too few, mostly irrelevant	time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation	concise and correct or no questions asked
1	some relevant, sufficient number, clear things out	almost no	almost nothing	no or irrelevant	almost no	no	some incorrect,
2	most time used, many unclear points resolved, aimed at both rep. and opp.	very little	some main points	few	some	almost no	inconclusive or too long
3	+short, apt and clear, well prioritized time managed efficiently	not all	main points	some	to important topics	to some extent	deeply incorrect or show deep misconceptions
		almost all	all relevant points	many	to most topics	leading or cooperative	
		efficiently	practically all points	practically all	+ improvement suggestions	quite efficient	
						reasonable	
						very good	
						very good	

NOTES:

SCORESHEET

REPORTER

1 + $\boxed{4}$ + $\boxed{3}$ - $\boxed{0}$ = $\boxed{8}$

stage: Final
 reporter: Poland

room: Singapore
 reviewer: Singapore

problem no.: 17

Juror's name: Ms. MARIENKA
 signature: [Signature]

REPORT

	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	DISCUSSION WITH OPPONENT	efficiency	ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	scientific contribution almost no	almost no, chaotic	0 <input checked="" type="checkbox"/> concise and correct or no questions asked
1	some	some	some	some	review of sources, cited	partly	arguments/responses too few	avoided some questions	1 <input type="checkbox"/> some incorrect,
2	fair	fair	fair	not well fitting	some own input	average	some	cooperated well	2 <input type="checkbox"/> inconclusive or too long
3	good	good	sufficient number	qualitatively analysed	some interesting results	interesting	many	answered directly	3 <input type="checkbox"/> deeply incorrect or show deep misconceptions
4	detailed	quite detailed, correct	+ results explained	+ theory/limits explained/conclusive	considerable experimental or theoretical	some aspects above average	+ data/theory convincingly supported	answered directly to most questions	
5	demonstrative	correct	errors analysed	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	proved deep understanding	efficient, productive	
6	deep and shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis						

NOTES:

OPPONENT

Start from 1. and add/subtract

1 + $\boxed{2}$ + $\boxed{2}$ - $\boxed{0}$ = $\boxed{7}$

QUESTIONS ASKED

- 0 almost no, irrelevant
- 1 some relevant, aimed at resolving some unclear points
- 2 short allowing short answers, prioritized, all-time used

NOTES:

OPPOSITION (SPEECH)

time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation
0	almost no	no or irrelevant	almost no	no
1	very little	few	some	almost no
2	not all	some	to important topics	some
3	almost all	many	to most topics	reasonable
4	efficiently	practically all points	+ improvement suggestions	very good

DISCUSSION WITH REPORTER

scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation
0	almost no	very little	almost no	no
1	little	some	to some extent	almost no
2	partial	some correct	leading or cooperative	some
3	good	many correct	quite efficient	reasonable
4	new crucial point(s)	+ improvement suggestions	very efficient	very good

ANSWERS TO JURY and REVIEWER'S QUESTIONS

- 0 concise and correct or no questions asked
- 1 some incorrect,
- 2 inconclusive or too long
- 3 deeply incorrect or show deep misconceptions

REVIEWER

Start from 1. and add/subtract

1 + $\boxed{2}$ + $\boxed{3}$ - $\boxed{0}$ = $\boxed{9}$

QUESTIONS ASKED

- 0 too few, mostly irrelevant
- 1 some relevant, sufficient number, could clear things out
- 2 most time used; many unclear points resolved, aimed at both rep. and opp.
- 3 +short, apt and clear, well prioritized time managed efficiently

NOTES:

REVIEW OF REPORT

report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation
0	poor	too few	irrelevant	no
1	partial	some	partially relevant	almost no
2	good	many	mostly adequate	some
3	detailed, complex	+ improvement suggestions	fully adequate	good

REVIEW OF OPPOSITION

speech summary	discussion analysis	own opinions	pros & cons	prioritisation
0	poor	too few	irrelevant	no
1	too short/long	some	partially relevant	almost no
2	informative, apt	many	mostly adequate	some
3	brief but accurate	+ improvement suggestions	fully adequate	good

ANSWERS TO JURY QUESTIONS

- 0 concise and correct or no questions asked
- 1 some incorrect,
- 2 inconclusive or too long
- 3 deeply incorrect or show deep misconceptions

SCORESHEET

REPORTER Start from 1 and add/subtract
 1 + 4 + 15 - 0 = 7

stage: 2 fight (round no.): 6
 reporter: Poland opponent: China

room: 17 problem no.: 17
 reviewer: Signature

Juror's name: D. Kato
 signature: D. Kato

REPORT		DISCUSSION WITH OPPONENT				DISCUSSION WITH REPORTER		ANSWERS TO JURY and OPPONENT and REVIEWER'S QUESTIONS	
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency	
0 almost no	almost no	too few	no/almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic	0
1 some	some	some	some	review of sources, cited	partly	only technical	some	avoided some	1
2 fair	fair	fair	not well fitting	some own input	average	+ points cleared	many	questions	-1
3 good	good	well performed, sufficient number	deviations	some interesting results	interesting solution	points cleared		+ cooperated well	
4 detailed demonstrative	quite detailed, correct	+ results explained errors analysed	qualitatively analysed + theory limits explained, conclusive	considerable experimental or theoretical	some aspects above average	interesting points discussed	+ data/theory convincingly supported	answered directly to most questions	
5 deep and comprehensive, shows physical insight	completely testable, convincing analysis	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	brought in new physics	proved deep understanding	efficient, productive	
6									-2

NOTES:

OPPONENT Start from 1 and add/subtract
 1 + 2 + 2 + 3 - 0 = 8

QUESTIONS ASKED		OPPOSITION (SPEECH)				DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS		
		time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation	scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation	
0 almost no, irrelevant		almost no	almost nothing	no or irrelevant	almost no	no	almost no	irrelevant	very little	almost no	no	0
1 some relevant, aimed at resolving some unclear points		very little	some main points	few	some	almost no	little	some	some	to some extent	almost no	-1
2 short allowing short answers, prioritized, all time used		not all	main points	some	to important topics	some	partial	average	some correct	leading or cooperative	some	
		almost all	all relevant points	many	to most topics + improvement	reasonable	+ good	+ many	many correct	quite efficient	+ reasonable	
		all & efficiently	practically all points	practically all	suggestions	very good	new crucial point(s)	almost all	+ improvement suggestions	very efficient	very good	-2

NOTES:

REVIEWER Start from 1 and add/subtract
 1 + 3 + 3 + 2 - 0 = 9

QUESTIONS ASKED		REVIEW OF REPORT				REVIEW OF OPPOSITION				ANSWERS TO JURY QUESTIONS		
		report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	speech summary	discussion analysis	own opinions	pros & cons	prioritisation	
0 too few, mostly irrelevant		poor	almost no	too few	irrelevant	no	poor	almost no	too few	irrelevant	no	0
1 some relevant, sufficient number, could clear things out		partial	too short/long	some	partially relevant	almost no	too short/long	too short/long	some	partially relevant	almost no	-1
2 most time used, many unclear points resolved, aimed at both rep. and opp.		good	relevant parts	many	mostly adequate	some	informative, apt	relevant parts	many	mostly adequate	some	
+short, apt and clear, well prioritized time managed efficiently		+ detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	good	brief but accurate	accurate, conclusive	+ improvement suggestions	fully adequate	good	-2

NOTES:

SCORESHEET

Juror's name: Hong Jung
signature: HJ

problem no.:
room: Final
reviewer:

stage: 2
fight (round no.):
opponent:

REPORTER
1 + 3 + 2 - 0 = 6
Start from 1 and add/subtract

REPORT		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS				
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	scientific contribution	relevant arguments/responses	efficiency
0 almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	0 almost no	too few	almost no, chaotic
1 some	some	some	some	review of sources, cited	partly	1 only technical	some	avoided some
2 fair	fair	fair	not well fitting	some own input	average	2 some scientific	many	questions asked
3 good	good	well performed, sufficient number	qualitatively analysed	some interesting results	interesting solution	3 interesting points	+ data/theory	some incorrect,
4 detailed	quite detailed,	+ results explained	+ theory limits	considerable experimental	some aspects	4 discussed	convincingly supported	inconclusive or too long
5 demonstrative	correct	errors analysed	explained, conclusive	or theoretical	above average	5 brought in new	proved deep	deeply incorrect or show
6 deep and comprehensive,	detailed, complex,	+ reproducible,	well fitting, deviations	considerable experimental	greater extent	4 physics	understanding	deep misconceptions
shows physical insight	completely testable,	convincing analysis	analysed, conclusive	and theoretical	than expected			

NOTES:

OPPONENT

1 + 1 + 25 + 2 - 0 = 65
Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS					
time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation	scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation
0 almost no, irrelevant	almost nothing	no or irrelevant	almost no	no	0 almost no	irrelevant	very little	almost no	no
1 some relevant, aimed at resolving some unclear points	some main points	few	some	almost no	1 little	some	some	to some extent	no
2 short allowing short answers, prioritized, all time used	main points	some	to important topics	some	2 partial	average	some correct	leading or cooperative	almost no
	all relevant points	many	to most topics	reasonable	3 good	many	many correct	quite efficient	some
	practically all points	practically all	+ improvement suggestions	very good	4 new crucial point(s)	almost all	+ improvement suggestions	very efficient	reasonable
									very good

NOTES:

REVIEWER

1 + 2 + 3 + 15 - 0 = 95
Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS					
report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	speech summary	discussion analysis	own opinions	pros & cons	prioritisation
0 too few, mostly irrelevant	almost no	too few	irrelevant	no	0 poor	almost no	too few	irrelevant	no
1 some relevant, sufficient number, could clear things out	too short/long	some	partially relevant	almost no	1 too short/long	too short/long	some	partially relevant	almost no
2 most time used, many unclear points resolved, aimed at both rep. and opp.	relevant parts	many	mostly adequate	some	2 informative, apt	relevant parts	many	mostly adequate	some
+short, apt and clear, well prioritized	accurate, conclusive	+ improvement suggestions	fully adequate	good	3 brief but accurate	accurate, conclusive	+ improvement suggestions	fully adequate	good
time managed efficiently									

NOTES:

SCORESHEET

stage: 2 fight (round no.): FINAL problem no.: 17
 reporter: POLAND opponent: CHINA reviewer: SINGAPORE
 Juror's name: E. ESCHENAZI signature: *[Signature]*

REPORT		DISCUSSION WITH OPPONENT		DISCUSSION WITH REPORTER		ANSWERS TO JURY and OPPONENT and REVIEWER'S QUESTIONS	
phenomenon explanation	theory/model	comparison between theory and experiment	own contribution	scientific contribution	relevant arguments/responses	efficiency	ANSWERS TO JURY and OPPONENT and REVIEWER'S QUESTIONS
1 + 2.5 + 2 - 0.5 = 5.0	almost no theory/model	no/ almost no theory and experiment	others' data, incorrectly cited	almost no scientific contribution	too few relevant arguments/responses	almost no, chaotic efficiency	0
2	some fair	some no or irrelevant theory and experiment	review of sources, cited	little scientific contribution	some	avoided some chaotic questions	-1
3	fair	not well fitting theory and experiment	some own input	partial scientific contribution	many	cooperated well	-2
4	well performed, sufficient number of results explained	deviations qualitatively analysed	some interesting results	good scientific contribution	interesting points discussed	answered directly to most questions	
5	+ errors analysed	+ theory limits explained, conclusive	considerable experimental or theoretical	new crucial point(s)	+ data/theory convincingly supported	efficient, productive	
6	deep and comprehensive, shows physical insight	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	almost all	proved deep understanding		

NOTES: *Cylindrical bullet. x R, + NOT explaining the journey. conditions in the journey? Turbulence Third graph. (green) Turbulence. Mess and shape. Efficiency is it defused.*

OPONENT Start from 1 and add/subtract
 1 + 1.5 + 3.2 + 3.1 - 0 = 8.8

QUESTIONS ASKED		OPPOSITION (SPEECH)		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	correct own opinions expressed	relevance of topics	own opinions presented	efficiency	efficiency	ANSWERS TO JURY and REVIEWER'S QUESTIONS
0	almost no	almost no	irrelevant	very little	almost no	almost no	0
1	very little	some	no or irrelevant	some	to some extent	almost no	-1
2	not all	to important topics	few	average	leading or cooperative	some	-2
3	all relevant points	+ improvement suggestions	many	many correct	quite efficient	reasonable	
4	efficiently	practically all	practically all	almost all	very efficient	very good	

NOTES: *Munkle velocity Diameter - Tube Good question*

REVIEWER Start from 1 and add/subtract
 1 + 2.0 + 2.0 + 3.0 - 0 = 9

QUESTIONS ASKED		REVIEW OF OPPOSITION		REVIEW OF REPORT		ANSWERS TO JURY QUESTIONS	
report summary & understanding	discussion analysis	own opinions	pros & cons	report summary	discussion analysis	own opinions	ANSWERS TO JURY QUESTIONS
0	poor	too few	irrelevant	poor	almost no	too few	0
1	partial	some	partially relevant	too short/long	too short/long	some	-1
2	good	many	mostly adequate	informative, apt	relevant parts	many	-2
3	detailed, complex	+ improvement suggestions	fully adequate	brief-but accurate	accurate, conclusive	+ improvement suggestions	

NOTES: *[Handwritten notes]*

SCORESHEET

Juror's name: J. Baycombe
signature: [Signature]

room: FINAN
problem no.: Singapore

stage: Round
fight (round no.): 1
opponent: China
reporter: [Signature]
reviewer: Singapore

REPORTER
Start from 1 and add/subtract
 $1 + 2.5 + 2.5 - 0.5 = 6$

REPORT	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	DISCUSSION WITH OPPONENT	ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	scientific contribution almost no	concise and correct or no questions asked
1	some	some	some	some	review of sources, cited	partly	relevant arguments/responses too few	no questions asked
2	fair	fair	fair	not well fitting deviations	some own input	average	some	some incorrect,
3	good	good	well performed sufficient number	qualitatively analysed + theory limits	some interesting results	interesting solution	many	inconclusive or too long
4	detailed	quite detailed, correct	+ results explained errors analysed	explained, conclusive	considerable experimental or theoretical	some aspects above average	+ data/theory	deeply incorrect or show deep misconceptions
5	demonstrative	deep and comprehensible, detailed, complex,	convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	convincingly supported	
6	shows physical insight	completely testable					proved deep understanding	

NOTES:

OPPONENT
Start from 1 and add/subtract
 $1 + 1 + 2 + 2.5 - 0 = 7$

QUESTIONS ASKED	time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation	DISCUSSION WITH REPORTER	ANSWERS TO JURY and REVIEWER'S QUESTIONS
0	almost no	almost nothing	no or irrelevant	almost no	no	scientific contribution almost no	concise and correct or no questions asked
1	very little	some main points	few	some	almost no	little	questions asked
2	not all	main points	some	to important topics	some	partial	some incorrect,
3	almost all	all relevant points	many	to most topics + improvement	reasonable	good	inconclusive or too long
4	efficiently	practically all points	practically all	suggestions	very good	new crucial point(s)	deeply incorrect or show deep misconceptions

NOTES:

REVIEWER
Start from 1 and add/subtract
 $1 + 1 + 2.5 + 2.5 - 0 = 7$

QUESTIONS ASKED	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	REVIEW OF OPPOSITION	ANSWERS TO JURY QUESTIONS
0	too few, mostly irrelevant	almost no	too few	irrelevant	no	speech summary poor	concise and correct or no questions asked
1	some relevant, sufficient number, could clear things out	too short/long	some	partially relevant	almost no	too short/long	no questions asked
2	most time used, many unclear points resolved, aimed at both rep. and opp.	relevant parts	many	mostly adequate	some	informative, apt relevant parts	some incorrect,
3	+short, apt and clear, well prioritized time managed efficiently	accurate/conclusive	+ improvement suggestions	fully adequate	good	brief but accurate	deeply incorrect or show deep misconceptions

NOTES:

Does not give time for proper answers
Not reviewed

SCORESHEET

REPORTER

1 + 2.25 + 1.75 - 1 = 4

Start from 1 and add/subtract

stage: 2

problem no.: 17

Juror's name: Mathias Adessa

reporter: Poland

room: Singapore

signature: An

opponent: China

REPORT		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS	
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment
0 almost no	almost no	too few	no/almost no	others' data, incorrectly cited	misunderstood
1 some	some	some	some	review of sources, cited	partly
2 fair	fair	fair	not well fitting	some own input	average
3 good	good	well performed, sufficient number	deviations	some interesting results	interesting solution
4 detailed	quite detailed, correct	+ results explained	qualitatively analysed	considerable experimental or theoretical	some aspects above average
5 demonstrative	correct	errors analysed	+ theory limits explained, conclusive	considerable experimental and theoretical	greater extent than expected
6 deep and shows physical insight	completely testable	convincing analysis	well fitting, deviations analysed, conclusive		

NOTES: Compressibility of air, measurement of velocity wrong mess of ball

OPPONENT

1 + 0.5 + 3 + 2.5 - 0 = 7

Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	scientific contribution of topics	own opinions presented	efficiency	prioritisation
0 almost no, irrelevant	almost nothing	almost no	very little	almost no	no
1 some relevant, aimed at resolving some unclear points	few main points	little	some	to some extent	almost no
2 short allowing short answers, prioritized, all time used	some main points	partial	some correct	leading or cooperative	some
	all relevant points	good	many correct	quite efficient	reasonable
	practically all points	new crucial point(s)	+ improvement suggestions	very efficient	very good

NOTES:

Not letting rep answer

REVIEWER

1 + 1.5 + 3 + 2 - 0 = 8

Start from 1 and add/subtract

QUESTIONS ASKED		REVIEW OF REPORT		REVIEW OF OPPOSITION		ANSWERS TO JURY QUESTIONS	
time used	understanding of presentation	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	concise and correct or no questions asked
0 too few, mostly irrelevant	poor	poor	almost no	too few	irrelevant	no	0
1 some relevant, sufficient number, could clear things out	partial	partial	too short/long	some	partially relevant	almost no	1
2 most time used, many unclear points resolved, aimed at both rep. and opp.	good	good	relevant parts	many	mostly adequate	some	2
3 +short, apt and clear, well prioritized time managed efficiently	detailed, complex	detailed, complex	accurate, conclusive	+ improvement suggestions	adequate	adequate	3

NOTES:

Nice and concise with many own opinions

SCORESHEET

Juror's name: PRESCHA
signature: [Signature]

room: 17
problem no.: 17

fight (round no.): F
opponent: CHIN

stage: 11
reporter: pol

reviewer: [Signature]

REPORTER
1 + 3 + 2 - 0 = 6
Start from 1 and add/subtract

REPORT		DISCUSSION WITH OPPONENT			ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS			
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency
0 almost no	almost no	too few	no/almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 some	some	some	some	review of sources, cited	partly	only technical	some	avoided some
2 fair	fair	fair	not well fitting	some own input	average	points cleared	many	questions
3 good	good	sufficient number	qualitatively analysed	some interesting results	interesting solution	some scientific		cooperated well
4 detailed	quite detailed, correct	+ results explained	+ theory limits	considerable experimental	some aspects	interesting points	+ data/theory	answered directly
5 demonstrative	correct	errors analysed	explained, conclusive	or theoretical	above average	discussed	convincingly supported	to most questions
6 deep and comprehensive, shows physical insight	detailed, complex, completely testable; convincing analysis	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	brought in new physics	proved deep understanding	efficient, productive

NOTES:

OPPONENT		DISCUSSION WITH REPORTER			ANSWERS TO JURY and REVIEWER'S QUESTIONS			
QUESTIONS ASKED	time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	own opinions presented	efficiency	efficiency	prioritisation
0 almost no, irrelevant	almost no	almost nothing	no or irrelevant	almost no	very little	almost no	almost no	no
1 some relevant, aimed at resolving some unclear points	very little	some main points	few	some	some	to some extent	almost no	some incorrect, inconclusive or too long
2 short allowing short answers, prioritized, all time used	not all	main points	some	to important topics	some correct	leading or cooperative	some	deeply incorrect or show deep misconceptions
	almost all	all relevant points	many	to most topics + improvement suggestions	many correct	quite efficient	reasonable	
	efficiently	practically all points	practically all		+ improvement suggestions	very efficient	very good	

NOTES:

REVIEWER		REVIEW OF OPPOSITION			ANSWERS TO JURY QUESTIONS	
QUESTIONS ASKED	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	efficiency
0 too few, mostly irrelevant	poor	almost no	too few	irrelevant	no	almost no, chaotic
1 some relevant, sufficient number, could clear things out	partial	too short/long	some	partially relevant	almost no	avoided some
2 most time used, many unclear points resolved, aimed at both rep. and opp.	good	relevant parts	many	mostly adequate	some	questions
3 +short, apt and clear, well prioritized time managed efficiently	detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	good	cooperated well

NOTES:

SCORESHEET

stage: 1 fight (round no.): Final room: - problem no.: -
 reporter: Hungary opponent: Poland reviewer: Chiken Juror's name: Jm
 signature: Jm

REPORTER Start from 1 and add/subtract
 1 + 3 + 3 - 0 = 7

REPORT		DISCUSSION WITH OPPONENT		DISCUSSION WITH REPORTER		ANSWERS TO JURY and OPPONENT and REVIEWER'S QUESTIONS		
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency
0 <u>-</u> almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 <u>-</u> some	some	some	some	review of sources, cited	partly	only technical	some	avoided some
2 <u>-</u> fair	fair	fair	not well fitting	some own input	average	points cleared	many	questions asked
3 <u>-</u> good	good	well performed, sufficient number	deviations qualitatively analysed	some interesting results	interesting solution	points cleared	many	cooperated well
4 <u>-</u> detailed, correct	quite detailed, correct	+ results explained	+ theory limits explained, conclusive	considerable experimental or theoretical	some aspects above average	interesting points discussed	<u>+ data/theory convincingly supported</u>	answered directly to most questions
5 <u>-</u> deep and comprehensive, shows physical insight	detailed, correct, completely testable	errors analysed	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	brought in new physics	proved deep understanding	efficient, productive

NOTES:

OPPONENT Start from 1 and add/subtract
 1 + 2 + 3 + 2 - 0 = 8

QUESTIONS ASKED		OPPOSITION (SPEECH)		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS		
time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation
0 <u>-</u> almost no, irrelevant	almost nothing	no or irrelevant	almost no	almost no	irrelevant	very little	almost no	no
1 <u>-</u> some relevant, aimed at resolving some unclear points	some main points	few	some	almost no	some	some	almost no	no
2 <u>-</u> short allowing short answers, prioritized, all time used	main points	some	to important topics	some	average	some correct	to some extent	almost no
3 <u>-</u> detailed, all time used	all relevant points	many	to most topics + improvement	reasonable	good	many correct	leading or cooperative	some
4 <u>-</u> efficiently	practically all points	practically all	suggestions	very good	new crucial point(s)	+ improvement suggestions	quite efficient	reasonable

NOTES:

REVIEWER Start from 1 and add/subtract
 1 + 2 + 2 - 0 = 7

QUESTIONS ASKED		REVIEW OF REPORT		REVIEW OF OPPOSITION		ANSWERS TO JURY QUESTIONS	
time used	understanding of presentation	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	efficiency
0 <u>-</u> too few, mostly irrelevant	almost no	poor	almost no	too few	irrelevant	no	almost no, chaotic
1 <u>-</u> some relevant, sufficient number, could clear things out	some main points	partial	too short/long	some	partially relevant	almost no	avoided some
2 <u>-</u> resolved, aimed at both rep. and opp.	main points	good	relevant parts	many	mostly adequate	some	questions asked
3 <u>-</u> +short, apt and clear, well prioritized time managed efficiently	detailed, complex	detailed, complex	accurate, conclusive	+ improvement suggestions	adequate	good	cooperated well

NOTES:

SCORESHEET

stage: F fight (round no.): F room: g problem no.: g
 reporter: HUN opponent: POL reviewer: Juror's name: PLÉSCUT
 signature: [Signature]

REPORTER
 1 + 5 + 2 - 1 = 7
 Start from 1 and add/subtract

REPORT		DISCUSSION WITH OPPONENT		DISCUSSION WITH REPORTER		ANSWERS TO JURY and OPPONENT and REVIEWER'S QUESTIONS		
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency
0 almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 some	some	some	some	review of sources, cited	partly	only technical	some	avoided some questions
2 fair	fair	fair	not well fitting	some own input	average	some scientific	many	cooperated well
3 good	good	well performed, sufficient number	deviations	some interesting results	interesting solution	points cleared		
4 detailed	quite detailed, correct	+ results explained	qualitatively analysed	considerable experimental or theoretical	some aspects above average	interesting points discussed	+ data/theory convincingly supported	answered directly to most questions
5 demonstrative	deep and comprehensive, detailed, complex, shows physical insight	errors analysed, + reproducible, convincing analysis	+ theory limits explained, conclusive, well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	brought in new physics	proved deep understanding	efficient, productive
6								

NOTES:

opponents of Stokes Jaw

OPPONENT
 1 + 0.5 + 2.5 + 1.5 - = 5
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		DISCUSSION WITH OPPONENT		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	scientific contribution of topics	own opinions presented	efficiency	prioritisation
0 almost no, irrelevant	almost nothing	no or irrelevant	almost no	almost no	very little	almost no	no
1 some relevant, aimed at resolving some unclear points	some main points	few	some	little	some	to some extent	almost no
2 short allowing short answers, prioritized, all time used	main points	some	to important topics	partial	some correct	leading or cooperative	some
	all relevant points	many	to most topics + improvement suggestions	good	many correct	quite efficient	reasonable
	practically all points	practically all		new crucial point(s)	+ improvement suggestions	very efficient	very good

- tennis velocity

REVIEWER
 1 + 1.5 + 2.5 + 1.5 - = 6
 Start from 1 and add/subtract

QUESTIONS ASKED		REVIEW OF REPORT		REVIEW OF OPPOSITION		ANSWERS TO JURY QUESTIONS	
time managed efficiently	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	speech summary	discussion analysis
0 too few, mostly irrelevant	poor	almost no	too few	irrelevant	no	poor	almost no
1 some relevant, sufficient number, could clear things out	partial	too short/long	some	partially relevant	almost no	too short/long	too short/long
2 most time used, many unclear points resolved, aimed at both rep. and opp.	good	relevant parts	many	mostly adequate	some	informative, apt	relevant parts
3 +short, apt and clear, well prioritized	detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	good	brief but accurate	accurate, conclusive

NOTES:

SCORESHEET

REPORTER
 1 + 4 + 1.5 - 0.5 = 6
 Start from 1 and add/subtract

stage: 1 fight (round no.): Final room: China problem no.:
 reporter: Hungary opponent: Poland reviewer: China

Juror's name: Melissa Anderson
 signature: An

REPORT		DISCUSSION WITH OPPOSITION		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS	
0	phenomenon explanation almost no	theory/model almost no	relevant experiments too few	comparison between theory and experiment no/ almost no	own contribution others' data, incorrectly cited	task fulfilment misunderstood	efficiency almost no, chaotic
1	some	some	some	some	review of sources, cited	partly	avoided some questions
2	fair	fair	fair	not well fitting deviations	some own input	average	cooperated well
3	good	good	well performed, sufficient number	qualitatively analysed + theory limits	some interesting results	interesting solution	answered directly to most questions
4	good detailed	good quite detailed, correct	+ results explained errors analysed	explained, conclusive well fitting, deviations analysed, conclusive	considerable experimental or theoretical	some aspects above average	efficient, productive
5	demonstrative	correct	+ reproducible, convincing analysis		considerable experimental and theoretical	greater extent than expected	
6	deep and comprehensible, shows physical insight	detailed, complex, completely testable					

NOTES:

OPPONENT

1 + 1 + 3 + 3 - 0 = 8
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		DISCUSSION WITH OPPOSITION		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
0	almost no, irrelevant	time used almost no	understanding of presentation almost nothing	relevant topics addressed no or irrelevant	correct own opinions expressed almost no	prioritisation no	concise and correct or no questions asked
1	some relevant, aimed at resolving some unclear points	very little	some main points	no or irrelevant	some	almost no	questions asked
2	short allowing short answers, prioritized, all time used	not all	main points	few	to important topics	to some extent	some incorrect,
3		almost all	all relevant points	some	many	leading or cooperative	inconclusive or too long
4		efficiently	practically all points	many	to most topics + improvement suggestions	quite efficient	deeply incorrect or show deep misconceptions

NOTES:

Good challenge in Round 1

REVIEWER

1 + 1 + 2 + 2 - 0 = 6
 Start from 1 and add/subtract

QUESTIONS ASKED		REVIEW OF REPORT		REVIEW OF OPPOSITION		ANSWERS TO JURY QUESTIONS	
0	too few, mostly irrelevant	report summary & understanding poor	discussion analysis almost no	own opinions too few	pros & cons irrelevant	prioritisation no	concise and correct or no questions asked
1	some relevant, sufficient number, could clear things out	partial	too short/long	some	partially relevant	almost no	questions asked
2	most time used, many unclear points resolved, aimed at both rep. and opp.	good	relevant parts	many	mostly adequate	some	some incorrect,
3	+short, apt and clear, well prioritized time managed efficiently	detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	good	inconclusive or too long

NOTES:

SCORESHEET

stage: **1** fight (round no.): **FINAL** room: **9** problem no.: **9**
 reporter: **Hungary** opponent: **Poland** reviewer: **China** Juror's name: **J. Barcombe**
 signature: **JLB**

REPORTER
 1 + **2** + **2** - **0** = **6**
 Start from 1 and add/subtract

REPORT	DISCUSSION WITH OPPONENT				task fulfillment	DISCUSSION WITH REPORTER				efficiency	ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS
	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment		own contribution	scientific contribution	relevant arguments/responses	efficiency		
0	almost no	almost no	too few	no/ almost no	misunderstood	almost no	almost no	too few	almost no, chaotic	0	concise and correct or no questions asked
1	some	some	some	some	partly	others' data, incorrectly cited	no or irrelevant	some	avoided some	-1	some incorrect, inconclusive or too long
2	fair	fair	fair	not well fitting	average	review of sources, cited	few	some	questions	-2	deeply incorrect or show deep misconceptions
3	good	good	well performed, sufficient number	qualitatively analysed	interesting solution	some own input	some	to some extent	cooperated well		
4	detailed	quite detailed, correct	+ results explained	+ theory limits	some aspects above average	some interesting results	many	leading or cooperative			
5	demonstrative	correct	errors analysed	explained, conclusive	greater extent than expected	considerable experimental or theoretical	many correct	quite efficient	answered directly to most questions		
6	deep and comprehensive, shows physical insight	detailed, complex, completely testable, convincing analysis	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive		considerable experimental and theoretical	+ improvement suggestions	very efficient	productive		

NOTES:

OPPONENT
 1 + **1.5** + **2.5** + **2** - **0** = **7**
 Start from 1 and add/subtract

QUESTIONS ASKED	DISCUSSION WITH REPORTER				prioritisation	DISCUSSION WITH OPPONENT				efficiency	ANSWERS TO JURY and REVIEWER'S QUESTIONS
	time used	understanding of presentation	relevant topics addressed	correct own opinions expressed		scientific contribution	relevance of topics	own opinions presented	efficiency		
0	almost no	almost nothing	no or irrelevant	almost no	0	almost no	very little	almost no	almost no	0	concise and correct or no questions asked
1	very little	some main points	few	some	1	little	some	to some extent	almost no	-1	some incorrect, inconclusive or too long
2	not all	main points	some	to important topics	2	partial	some correct	leading or cooperative	some		
3	almost all	all relevant points	many	to most topics + improvement suggestions	3	good	many correct	quite efficient	reasonable		
4	efficiently	practically all points	practically all		4	new crucial point(s)	+ improvement suggestions	very efficient	very good	-2	deeply incorrect or show deep misconceptions

NOTES:

REVIEWER
 1 + **1.5** + **2** + **2** - **0** = **7**
 Start from 1 and add/subtract

QUESTIONS ASKED	REVIEW OF REPORT				prioritisation	REVIEW OF OPPOSITION				efficiency	ANSWERS TO JURY QUESTIONS
	report summary & understanding	discussion analysis	own opinions	pros & cons		speech summary	discussion analysis	own opinions	pros & cons		
0	poor	almost no	too few	irrelevant	0	poor	almost no	too few	irrelevant	0	concise and correct or no questions asked
1	partial	too short/long	some	partially relevant	1	too short/long	too short/long	some	partially relevant	-1	some incorrect, inconclusive or too long
2	good	relevant parts	many	mostly adequate	2	informative, apt	relevant parts	many	mostly adequate		
3	detailed, complex	accurate, conclusive	+ improvement suggestions	adequate	3	brief but accurate	conclusive	+ improvement suggestions	adequate	-2	deeply incorrect or show deep misconceptions

NOTES:

SCORESHEET

stage: 7 fight (round no.): 6 room: 9 problem no.: 9
 reporter: Hogarty opponent: Ching reviewer: Ching Juror's name: D. Keller
 signature: D. Keller

REPORTER
 1 + 4 + 2 - 0 = 7
 Start from 1 and add/subtract

REPORT		phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	DISCUSSION WITH OPPONENT	ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS
0		almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	scientific contribution almost no	0
1		some	some	some	some	review of sources, cited	partly	arguments/responses too few	1
2		fair	fair	fair	not well fitting	some own input	average	only technical points cleared	2
3		good	good	well performed, sufficient number	deviations	some interesting results	interesting solution	many	3
4		detailed	quite detailed, correct	+ results explained	+ theory limits	considerable experimental or theoretical	+ some aspects above average	+ data/theory convincingly supported	4
5		deep and comprehensive, shows physical insight	deep and comprehensive, detailed, complex, completely testable	errors analysed, + reproducible, convincing analysis	explained, conclusive, well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	proved deep understanding	5

NOTES:

OPPONENT
 1 + 1.5 + 2 - 2 = 7
 Start from 1 and add/subtract

QUESTIONS ASKED		time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation	DISCUSSION WITH REPORTER	ANSWERS TO JURY and REVIEWER'S QUESTIONS
0	almost no, irrelevant	almost no	almost nothing	no or irrelevant	almost no	no	scientific contribution almost no	0
1	some relevant, aimed at resolving some unclear points	very little	some main points	few	some to important topics	almost no	little	1
2	short allowing short answers, prioritized, all time used	not all	+ main points	some	to most topics + improvement suggestions	some	partial	2
3		almost all	all relevant points	many		reasonable	good	3
4		all & efficiently	practically all points	practically all		very good	new crucial point(s)	4

NOTES:
 + short allowing short answers, prioritized, all time used
 → dumbbells in clear!

REVIEWER
 1 + 3 + 2 - 0 = 5
 Start from 1 and add/subtract

QUESTIONS ASKED		report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	REVIEW OF OPPOSITION	ANSWERS TO JURY QUESTIONS
0	too few, mostly irrelevant	poor	almost no	too few	irrelevant	no	speech summary poor	0
1	some relevant, sufficient number, could clear things out	partial	too short/long	some	partially relevant	almost no	too short/long	1
2	most time used, many unclear points resolved, aimed at both rep. and opp.	good	relevant parts	many	+ mostly adequate	some	informative, apt relevant parts	2
3	+short, apt and clear, well prioritized time managed efficiently	+ detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	good	brief but accurate	3

NOTES:

SCORESHEET

stage: Final fight (round no.): 9 problem no.: 9 Juror's name: Hong Jung

reporter: 1 opponent: 1 reviewer: 1 signature: [Signature]

REPORTER Start from 1 and add/subtract

$$1 + 2.5 + 1.5 - 0 = 5$$

REPORT		DISCUSSION WITH OPPONENT				ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS		
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency
0 <u>1</u> almost no	some	too few	no/ almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 <u>2</u> some	fair	fair	some	review of sources, cited	partly	only technical	some	avoided some
2 <u>3</u> fair	good	well performed, sufficient number	not well fitting deviations	some own input	average	points cleared	many	questions asked cooperated well
3 <u>4</u> good	quite detailed, correct	+ results explained	qualitatively analysed + theory limits	some interesting results	interesting solution	points cleared		answered directly
4 <u>5</u> detailed	correct	+ errors analysed	explained, conclusive	considerable experimental or theoretical	some aspects above average	discussed	+ data/theory	to most questions
5 <u>6</u> demonstrative	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	brought in new physics	proved deep understanding	efficient, productive
6 <u>7</u> shows physical insight								

NOTES:

OPPONENT

Start from 1 and add/subtract

$$1 + 1.5 + 2 + 0 = 4.5$$

QUESTIONS ASKED		DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS			
	time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation
0 <u>1</u> almost no, irrelevant	almost no	almost nothing	no or irrelevant	almost no	almost no	irrelevant	very little	almost no	no
1 <u>2</u> some relevant, aimed at resolving some unclear points	very little	some main points	few	some	little	some	some	to some extent	almost no
2 <u>3</u> short allowing short answers, prioritized, all time used	not all	main points	some	to important topics	partial	average	some correct	leading or cooperative	some
	almost all	all relevant points	many	to most topics + improvement	good	many	many correct	quite efficient	reasonable
	all & efficiently	practically all points	practically all	suggestions	new crucial point(s)	almost all	+ improvement suggestions	very efficient	very good

NOTES:

REVIEWER

Start from 1 and add/subtract

$$1 + 1 + 2 + 1.5 - 0 = 6$$

QUESTIONS ASKED		DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS			
	time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation
0 <u>1</u> too few, mostly irrelevant	almost no	almost nothing	no or irrelevant	almost no	almost no	irrelevant	very little	almost no	no
1 <u>2</u> some relevant, sufficient number, could clear things out	poor	some main points	few	some	little	some	some	to some extent	almost no
2 <u>3</u> most time used, many unclear points resolved, aimed at both rep. and opp.	partial	main points	some	to important topics	partial	average	some correct	leading or cooperative	some
3 <u>4</u> +short, apt and clear, well prioritized time managed efficiently	good	all relevant points	many	to most topics + improvement	good	many	many correct	quite efficient	reasonable
	detailed, complex	practically all points	practically all	suggestions	new crucial point(s)	almost all	+ improvement suggestions	very efficient	very good

NOTES:

SCORESHEET

Juror's name: E. ESCHENAZI
signature: [Signature]

room: ADD TORAW problem no.: 9
reviewer: _____

fight (round no.): FINAL
opponent: HUNGARY

REPORTER Start from 1 and add/subtract
1 + 3.5 + 2 - 0 = 6.5
6

REPORT		DISCUSSION WITH OPPONENT			DISCUSSION WITH REPORTER		ANSWERS TO JURY, OPONENT and REVIEWER'S QUESTIONS	
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	scientific contribution	relevant arguments/responses	efficiency
0 almost no	almost no	too few	no/almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic questions
1 some	some	fair	some	review of sources, cited	partly	only technical	some	avoided some
2 fair	fair	well performed, sufficient number	not well fitting deviations	some own input	average	points cleared	many	questions cooperated well
3 good	good	+ results explained	qualitatively analysed	some interesting results	interesting solution	points cleared		
4 detailed	quite detailed, correct	+ errors analysed	+ theory limits	considerable experimental or theoretical	some aspects	interesting points discussed	+ data/theory	answered directly
5 demonstrative	correct	errors explained	explained, conclusive	considerable experimental and theoretical	above average	discussed	convincingly supported	to most questions
6 deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	greater extent	greater extent	brought in new physics	proved deep understanding	efficient, productive

NOTES: Density ball and liquid close to the center of rotation. NO error bars. Friction dependency, rolling friction.

Stable - unstable. Size of the ball, air bubble. One measurement

OPONENT

Start from 1 and add/subtract
1 + 1.3 + 2.7 + 2.3 - 0 = 7.3
7

2

1.5

2.5

QUESTIONS ASKED		DISCUSSION WITH OPPONENT				DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS			
		scientific contribution	relevance of topics	own opinions presented	efficiency	scientific contribution	relevance of topics	own opinions presented	efficiency	scientific contribution	relevance of topics	own opinions presented	efficiency
0 almost no, irrelevant	0 almost no, irrelevant	almost no	irrelevant	very little	almost no	almost no	irrelevant	very little	almost no	almost no	irrelevant	very little	almost no
1 some relevant, aimed at resolving some unclear points	1 very little	little	some	some	to some extent	little	some	some	to some extent	almost no	some	some	almost no
2 short allowing short answers, prioritized, all time used	2 not all	partial	average	some correct	leading or cooperative	partial	average	some correct	leading or cooperative	almost no	some	some	almost no
	3 almost all	good	many	many correct	quite efficient	good	many	many correct	quite efficient	almost no	some	reasonable	almost no
	4 all & efficiently	new crucial point(s)	almost all	+ improvement suggestions	very efficient	new crucial point(s)	almost all	+ improvement suggestions	very efficient	almost no	reasonable	reasonable	almost no

NOTES:

1.3

REPORTER

Start from 1 and add/subtract
1 + 1.3 + 2.6 + 2.5 - 0 = 7.5
8

3.5

2.5

2.5

2.5

2

2

2

QUESTIONS ASKED		REVIEW OF REPORT				REVIEW OF OPPOSITION				ANSWERS TO JURY QUESTIONS		
		report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	speech summary	discussion analysis	own opinions	pros & cons	prioritisation	
0 too few, mostly irrelevant	0 poor	almost no	almost no	too few	irrelevant	no	poor	almost no	too few	irrelevant	no	0 concise and correct or no questions asked
1 some relevant, sufficient number, could clear things out	1 partial	too short/long	too short/long	some	partially relevant	almost no	too short/long	too short/long	some	partially relevant	almost no	1 no questions asked
2 most time used, many unclear points resolved, aimed at both rep. and opp.	2 good	relevant parts	relevant parts	many	mostly adequate	some	informative, apt	relevant parts	many	mostly adequate	some	2 some incorrect, inconclusive or too long
3 +short, apt and clear, well prioritized time managed efficiently	3 detailed, complex	accurate, conclusive	accurate, conclusive	+ improvement suggestions	fully adequate	good	brief but accurate	accurate, conclusive	+ improvement suggestions	fully adequate	good	3 deeply incorrect or show deep misconceptions

NOTES:

1.14

Rolling friction 2.5

2.8

2.5

2.5

2.5

2.5

2.5

SCORESHEET

REPORTER

Start from 1 and add/subtract

1 + 3.5 + 1.5 - 0 = 6

room: 9

problem no.: 9

Juror's name: $SUE MARIK$

reporter: $Angus$

opponent: $Peter$

reviewer: $Chen$

signature: $[Signature]$

REPORT

	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood
1	some	some	some	some	review of sources, cited	partly
2	fair	fair	fair	not well fitting	some own input	average
3	good	good	well performed, sufficient number	deviations qualitatively analysed	some interesting results	interesting solution
4	detailed	quite detailed, correct	+ results explained	+ theory limits explained, conclusive	considerable experimental or theoretical	some aspects above average
5	demonstrative	detailed, complex, completely testable	errors analysed	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected
6	shows physical insight		convincing analysis			

DISCUSSION WITH OPPONENT

scientific contribution	arguments/responses	efficiency
0 almost no	too few	almost no, chaotic
1 only technical points cleared	some	avoided some questions
2 some scientific points cleared	many	cooperated well
3 interesting points discussed	+ data/theory convincingly supported	answered directly to most questions
4 brought in new physics	proved deep understanding	efficient, productive

ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS

0	concise and correct or no questions asked
1	some incorrect, inconclusive or too long
2	deeply incorrect or show deep misconceptions

NOTES:

OPPONENT

Start from 1 and add/subtract

1 + 1.5 + 2.5 + 2 - 0 = 7

QUESTIONS ASKED

- 0 almost no, irrelevant
- 1 some relevant, aimed at resolving some unclear points
- 2 short allowing short answers, prioritized, all time used

NOTES:

OPPOSITION (SPEECH)

time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation
0 almost no	almost nothing	no or irrelevant	almost no	no
1 very little	some main points	few	some	almost no
2 not all	main points	some	to important topics	some
3 almost all	all relevant points	many	to most topics + improvement suggestions	reasonable
4 all & efficiently	practically all points	practically all		very good

DISCUSSION WITH REPORTER

scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation
0 almost no	irrelevant	very little	almost no	no
1 little	some	some	to some extent	almost no
2 partial	average	some correct	leading or cooperative	some
3 good	many	many correct	quite efficient	reasonable
4 new crucial point(s)	almost all	+ improvement suggestions	very efficient	very good

ANSWERS TO JURY and REVIEWER'S QUESTIONS

0	concise and correct or no questions asked
1	some incorrect, inconclusive or too long
2	deeply incorrect or show deep misconceptions

REVIEWER

Start from 1 and add/subtract

1 + 1.5 + 2.5 + 2.5 - 0 = 8

QUESTIONS ASKED

- 0 too few, mostly irrelevant
- 1 some relevant, sufficient number, could clear things out
- 2 most time used, many unclear points resolved, aimed at both rep. and opp.
- 3 +short, apt and clear, well prioritized time managed efficiently

NOTES:

REVIEW OF REPORT

report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation
0 poor	almost no	too few	irrelevant	no
1 partial	too short/long	some	partially relevant	almost no
2 good	relevant parts	many	mostly adequate	some
3 detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	good

REVIEW OF OPPOSITION

speech summary	discussion analysis	own opinions	pros & cons	prioritisation
0 poor	almost no	too few	irrelevant	no
1 too short/long	too short/long	some	partially relevant	almost no
2 informative, apt	relevant parts	many	mostly adequate	some
3 brief but accurate	accurate, conclusive	+ improvement suggestions	fully adequate	good

ANSWERS TO JURY QUESTIONS

0	concise and correct or no questions asked
1	some incorrect, inconclusive or too long
2	deeply incorrect or show deep misconceptions

SCORESHEET

REPORTER Start from 1 and add/subtract
 stage: 1 fight (round no.): FINAL room: 9 Juror's name: THIL O'NEILL
 reporter: BALAZS opponent: POWELL reviewer: POWELL signature: POWELL

REPORT		DISCUSSION WITH OPPOSITION		DISCUSSION WITH REPORTER		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS		
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency
0 almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 some	some	some	some	review of sources, cited	partly	only technical	some	avoided some
2 fair	fair	fair	not well fitting	some own input	average	points cleared	many	questions cooperated well
3 good	good	well-performed, sufficient number	deviations qualitatively analysed	some interesting results	interesting solution	some scientific		
4 detailed	quite detailed, correct	+ results explained	+ theory limits explained, conclusive	considerable experimental or theoretical	some aspects above average	interesting points discussed	+ data/theory convincingly supported	answered directly to most questions
5 demonstrative	deep and comprehensible, detailed, complex, completely testable	errors analysed	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	brought in new physics	proved deep understanding	efficient, productive
6 shows physical insight		convincing analysis						

NOTES:

OPPONENT Start from 1 and add/subtract
 1 + $1\frac{1}{2}$ + 3 + $2\frac{1}{2}$ - 0 = 8

QUESTIONS ASKED		OPPOSITION (SPEECH)		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS			
time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation	scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation
0 almost no, irrelevant	almost nothing	no or irrelevant	almost no	no	almost no	irrelevant	very little	almost no	no
1 some relevant, aimed at resolving some unclear points	some main points	few	some	almost no	little	some	some	to some extent	almost no
2 short allowing short answers, prioritized, all time used	main points	some	to important topics	some	partial	average	some correct	leading or cooperative	some
	all relevant points	many	to most topics + improvement suggestions	reasonable	good	many	many-correct + improvement suggestions	quite efficient	reasonable
	practically all points	practically all		very good	new crucial point(s)	almost all		very efficient	very good

NOTES:

REVIEWER Start from 1 and add/subtract
 1 + $2\frac{1}{2}$ + 2 + $2\frac{1}{2}$ - 0 = 8

QUESTIONS ASKED		REVIEW OF REPORT		REVIEW OF OPPOSITION		ANSWERS TO JURY QUESTIONS			
report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation	speech summary	discussion analysis	own opinions	pros & cons	prioritisation
0 too few, mostly irrelevant	almost no	too few	irrelevant	no	poor	almost no	too few	irrelevant	no
1 some relevant, sufficient number, could clear things out	too short/long	some	partially relevant	almost no	too short/long	too short/long	some	partially relevant	almost no
2 most time used, many unclear points resolved, aimed at both rep. and opp.	relevant parts	many	mostly adequate	some	informative, apt relevant parts	informative, apt relevant parts	many	mostly adequate	some
3 +short, apt and clear, well prioritized time managed efficiently	detailed, complex	+ improvement suggestions	fully adequate	good	brief but accurate	accurate, conclusive	+ improvement suggestions	fully adequate	good

NOTES:

SCORESHEET

REPORTER
 1 + 3 + 3 = 7
 Start from 1 and add/subtract

stage: 1
 fight (round no.): Final
 reporter: Hungary
 opponent: Poland

room: 9
 reviewer: China

Juror's name: Ninut
 signature: Ninut

REPORT		DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS	
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment
0 almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood
1 some	some	some	some	review of sources, cited	partly
2 fair	fair	fair	not well fitting	some own input	average
3 good	good	well performed, sufficient number	deviations qualitatively analysed	some interesting results	interesting solution
4 detailed demonstrative	quite detailed, correct	+ results explained, errors analysed	+ theory limits explained, conclusive	considerable experimental or theoretical	some aspects above average
5 deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected
6					

NOTES:

OPPONENT/
 1 + 1 + 3 + 3 = 8
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of presentation	scientific contribution of topics	relevance of topics	own opinions presented	efficiency
0 almost no, irrelevant	almost nothing	almost no	irrelevant	very little	almost no
1 some relevant, aimed at resolving some unclear points	some main points	some	some	some	to some extent
2 short allowing short answers, prioritized, all time used	main points	to important topics	average	some correct	leading or cooperative
3	all relevant points	to most topics + improvement	many	many correct	quite efficient
4 all & efficiently	practically all points	suggestions	new crucial point(s)	+ improvement suggestions	very efficient
5					
6					

NOTES:

REVIEWER
 1 + 2 + 2 = 7
 Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH OPPONENT		ANSWERS TO JURY and REVIEWER'S QUESTIONS	
report summary & understanding	discussion analysis	own opinions	pros & cons	speech summary	discussion analysis
0 too few, mostly irrelevant	almost no	too few	irrelevant	poor	almost no
1 some relevant, sufficient number, could clear things out	too short/long	some	partially relevant	too short/long	too short/long
2 resolved, aimed at both rep. and opp.	relevant parts	many	mostly adequate	informative, apt relevant parts	accurate, conclusive
3 +short, apt and clear, well prioritized time managed efficiently	detailed, complex	+ improvement suggestions	fully adequate	brief but accurate	accurate, conclusive
4					
5					
6					

NOTES:

SCORESHEET

Juror's name: T. OPATRYW
signature: T.O.

room: 9 problem no.: 9
reporter: HUNGARY opponent: POLAND
reviewer: CHINA

stage: 1 fight (round no.):
reporter: HUNGARY opponent: POLAND

REPORTER
1 + 2.5 + 2.5 - 6 = 6
Start from 1 and add/subtract

REPORT		DISCUSSION WITH OPPONENT				ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS		
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	scientific contribution	relevant arguments/responses	efficiency
0 almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	almost no	too few	almost no, chaotic
1 some	some	some	some	review of sources, cited	partly	only technical	some	avoided some
2 fair	fair	fair	not well fitting	some own input	average	points cleared	many	questions cooperated well
3 good	good	well performed, sufficient number	deviations qualitatively analysed	some interesting results	interesting	some scientific		
4 detailed	quite detailed, correct	+ results explained	+ theory limits explained, conclusive	considerable experimental or theoretical	solution	points cleared	+ data/theory	answered directly
5 demonstrative	deep and comprehensible, detailed, complex, completely testable	errors analysed	well fitting, deviations analysed, conclusive	and theoretical	some aspects above average	interesting points discussed	convincingly supported	to most questions
6 shows physical insight		+ reproducible, convincing analysis			greater extent than expected	brought in new physics	proved deep understanding	efficient, productive

NOTES:

OPPONENT

1 + 1.5 + 3 + 3.5 - 9 = 9
Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS			
time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation	scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation
0 almost no, irrelevant	almost nothing	no or irrelevant	almost no	no	almost no	irrelevant	very little	almost no	no
1 some relevant, aimed at resolving some unclear points	some main points	few	some	almost no	little	some	some	to some extent	almost no
2 short allowing short answers, prioritized, all time used	main points	some	to important topics	some	partial	average	some correct	leading or cooperative	some
	all relevant points	many	to most topics + improvement suggestions	reasonable	good	many	many correct	quite efficient	reasonable
	practically all points	practically all		very good	new crucial point(s)	almost all	+ improvement suggestions	very efficient	very good

NOTES:

REVIEWER

1 + 1.5 + 2.5 + 2 - 7 = 7
Start from 1 and add/subtract

QUESTIONS ASKED		DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS			
time used	understanding of presentation	relevant topics addressed	correct own opinions expressed	prioritisation	scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation
0 too few, mostly irrelevant	almost nothing	no or irrelevant	almost no	no	almost no	irrelevant	very little	almost no	no
1 some relevant, sufficient number, could clear things out	some main points	few	some	almost no	little	some	some	to some extent	almost no
2 most time used, many unclear points resolved, aimed at both rep. and opp.	main points	some	to important topics	some	partial	average	some correct	leading or cooperative	some
3 +short, apt and clear, well prioritized time managed efficiently	all relevant points	many	to most topics + improvement suggestions	reasonable	good	many	many correct	quite efficient	reasonable
	practically all points	practically all		very good	new crucial point(s)	almost all	+ improvement suggestions	very efficient	very good

NOTES: