

SCORESHEET

REPORTER

Start from 1 and add/subtract

$$1 + \boxed{2.5} + \boxed{2} - \boxed{0} = \boxed{5.5}$$

stage: 1

fight (round no.): 1

room: E

problem no.: 10

Juror's name: Mathias Anderson

reporter: Belarus

opponent: Poland

reviewer: Brazil

signature: *[Signature]*

REPORT

	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	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	deep and comprehensible, shows physical insight		+ reproducible, convincing analysis			

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	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

$$1 + \boxed{1.5} + \boxed{3} + \boxed{3} - \boxed{0} = \boxed{8}$$

QUESTIONS ASKED

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

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

NOTES:

REVIEWER

Start from 1 and add/subtract

$$1 + \boxed{1.5} + \boxed{2} + \boxed{2} - \boxed{0} = \boxed{7}$$

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	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

NOTES:

SCORESHEET

REPORTER

Start from 1 and add/subtract

$$1 + \boxed{2.5} + \boxed{1.5} - \boxed{0} = \boxed{5}$$

stage:

fight (round no.):

room:

problem no.:

Juror's name:

reporter:

Belous

opponent:

Riad

reviewer:

Bray

10

signature:

Dr. Malik
S. S. S.

REPORT

	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	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	deep and comprehensible, shows physical insight		+ reproducible, convincing analysis			

DISCUSSION WITH OPPONENT

	scientific contribution	relevant 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

$$1 + \boxed{1.5} + \boxed{1.5} - \boxed{0} = \boxed{5}$$

QUESTIONS ASKED

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

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

NOTES:

REVIEWER

Start from 1 and add/subtract

$$1 + \boxed{1.5} + \boxed{1.5} + \boxed{1} - \boxed{0} = \boxed{5}$$

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	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

NOTES:

SCORESHEET

REPORTER

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

stage: 1
reporter: Belarus

fight (round no.): 1
opponent: Poland

room: E
reviewer: Brazil

problem no.: 10

Juror's name: Michael Steck
signature: MS

REPORT

	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	quite detailed, correct	+ results explained	+ theory limits explained, conclusive	considerable experimental or theoretical	some aspects above average
5	demonstrative	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected
6	deep and comprehensible, shows physical insight					

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	points cleared	many	cooperated well
3	some scientific		
4	interesting points discussed	+ data/theory convincingly supported	answered directly to most questions
5	brought in new physics	proved deep understanding	efficient, productive

ANSWERS TO JURY, OPPONENT and REVIEWER'S QUESTIONS

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

NOTES:

but unclear how performed

not convincing, supportive of his points

OPPONENT

Start from 1 and add/subtract
1 + 0.5 + 3 + 3 - 0.5 = 8

QUESTIONS ASKED

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

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

NOTES:

should have kept closer to the material presented in the report (or at least reference back), work better with the presenter reporter, not only say he was wrong

REVIEWER

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

QUESTIONS ASKED

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

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

NOTES:

but some questionable

SCORESHEET

REPORTER

Start from 1 and add/subtract

$$1 + 1.5 + 1.5 - 0.5 = 4$$

stage: 1

fight (round no.): 1

room: E

problem no.: 10

Juror's name: Ojha Khatib - 12/12/2019

reporter: Belarus

opponent: Poland

reviewer: Brazil

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

NOTES:

OPPONENT

Start from 1 and add/subtract

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

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	0 <input type="checkbox"/> almost no	irrelevant	very little	almost no	no	0 <input type="checkbox"/> concise and correct or no questions asked -1 <input type="checkbox"/> some incorrect, inconclusive or too long -2 <input type="checkbox"/> deeply incorrect or show deep misconceptions
1 <input checked="" type="checkbox"/> some relevant, aimed at resolving some unclear points		1 <input type="checkbox"/> very little	some main points	few	<input checked="" type="checkbox"/> some	almost no	1 <input type="checkbox"/> little	some	some	to some extent	almost no	
2 <input type="checkbox"/> short allowing short answers, prioritized, all time used		2 <input type="checkbox"/> not all	main points	some	to important topics	<input checked="" type="checkbox"/> some	2 <input type="checkbox"/> partial	average	some correct	leading or cooperative	some	
		3 <input checked="" type="checkbox"/> almost all	<input checked="" type="checkbox"/> all relevant points	<input checked="" type="checkbox"/> many	to most topics	reasonable	3 <input type="checkbox"/> good	many	<input checked="" type="checkbox"/> many correct	<input checked="" type="checkbox"/> quite efficient	reasonable	
		4 <input type="checkbox"/> all & efficiently	practically all points	practically all	+ improvement suggestions	very good	4 <input type="checkbox"/> new crucial point(s)	almost all	+ improvement suggestions	very efficient	very good	

NOTES:

REVIEWER

Start from 1 and add/subtract

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

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	<input checked="" type="checkbox"/> no	0 <input type="checkbox"/> poor	almost no	too few	irrelevant	no	0 <input checked="" type="checkbox"/> concise and correct or no questions asked -1 <input type="checkbox"/> some incorrect, inconclusive or too long -2 <input type="checkbox"/> deeply incorrect or show deep misconceptions
1 <input checked="" type="checkbox"/> some relevant, sufficient number, could clear things out		1 <input checked="" type="checkbox"/> partial	too short/long	<input checked="" type="checkbox"/> some	partially relevant	almost no	1 <input type="checkbox"/> too short/long	too short/long	<input checked="" type="checkbox"/> some	partially relevant	<input checked="" type="checkbox"/> almost no	
2 <input type="checkbox"/> most time used, many unclear points resolved, aimed at both rep. and opp.		2 <input type="checkbox"/> good	relevant parts	many	mostly adequate	some	2 <input type="checkbox"/> informative, apt	relevant parts	many	mostly adequate	some	
3 <input type="checkbox"/> +short, apt and clear, well prioritized time managed efficiently		3 <input type="checkbox"/> detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	good	3 <input type="checkbox"/> brief but accurate	accurate, conclusive	+ improvement suggestions	fully adequate	good	

NOTES:

SCORESHEET

REPORTER

Start from 1 and add/subtract
1 + 2 1/4 + 2 - 0 = 5

stage: 1

reporter: Belarus
T. Masaryk

fight (round no.): 1

opponent: Poland

room: E

reviewer: Brazil
Tiago Florio

problem no.: 10

Juror's name: Yung-Yuan Hsu
signature: Yung-Yuan Hsu

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	0 concise and correct or no questions asked -1 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1 some	some	some	some	review of sources, cited	partly	1 only technical	some	avoided some questions	
2 fair	fair	fair	not well fitting	some own input	average	2 some scientific	many	cooperated well	
3 good	good	well performed, sufficient number	deviations	some interesting results	interesting solution	3 interesting points	+ data/theory	answered directly	
4 detailed	quite detailed, correct	+ results explained	qualitatively analysed	considerable experimental or theoretical	some aspects above average	4 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	considerable experimental and theoretical	greater extent than expected	4 brought in new physics	proved deep understanding	efficient, productive	

NOTES:

OPPONENT

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

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		0 almost no	almost nothing	no or irrelevant	almost no	no	0 almost no	irrelevant	very little	almost no	no	0 concise and correct or questions asked -1 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1 some relevant, aimed at resolving some unclear points		1 very little	some main points	few	some	almost no	1 little	some	some	to some extent	almost no	
2 short allowing short answers, prioritized, all time used		2 not all	main points	some	to important topics	some	2 partial	average	some correct	leading or cooperative	some	
		3 almost all	all relevant points	many	to most topics	reasonable	3 good	many	many correct	quite efficient	reasonable	
		4 all & efficiently	practically all points	practically all	+ improvement suggestions	very good	4 new crucial point(s)	almost all	+ improvement suggestions	very efficient	very good	

NOTES:

REVIEWER

Start from 1 and add/subtract
1 + 2 + 2 + 1 1/4 - 0 = 6

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	too few	irrelevant	no	0 poor	almost no	too few	irrelevant	no	0 concise and correct or no questions asked -1 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1 some relevant, sufficient number, could clear things out		1 partial	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.		2 good	relevant parts	many	mostly adequate	some	2 informative, apt	relevant parts	many	mostly adequate	some	
3 +short, apt and clear, well prioritized time managed efficiently		3 detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	good	3 brief but accurate	accurate, conclusive	+ improvement suggestions	fully adequate	good	

NOTES:

SCORESHEET

REPORTER

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

stage: 2
reporter: Poland

fight (round no.): 1
opponent: Brazil

room: E
reviewer: Belarus

problem no.: 14

Juror's name: King-Yuan Hsu
signature: Yung-Yuan Hsu

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	0 almost no	0 too few	0 no/ almost no	0 others' data, incorrectly cited	0 misunderstood	0 almost no	0 too few	0 almost no, chaotic	0 <u>0</u> concise and correct or no questions asked -1 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1 some	1 some	1 some	1 some	1 review of sources, cited	1 partly	1 only technical	1 some	1 avoided some questions	
2 fair	2 fair	2 fair	2 not well fitting	2 some own input	2 average	2 some scientific	2 many	2 cooperated well	
3 good	3 good	3 well performed, sufficient number	3 deviations	3 some interesting results	3 interesting solution	3 interesting points	3 + data/theory	3 answered directly to most questions	
4 detailed demonstrative	4 quite detailed, correct	4 + results explained	4 qualitatively analysed	4 considerable experimental or theoretical	4 some aspects above average	4 discussed	4 convincingly supported	4 efficient, productive	
6 deep and comprehensible, shows physical insight	6 detailed, complex, completely testable	6 + reproducible, convincing analysis	6 well fitting, deviations analysed, conclusive	6 considerable experimental and theoretical	6 greater extent than expected	6 brought in new physics	6 proved deep understanding		

NOTES:

OPPONENT

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

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	0 some relevant, aimed at resolving some unclear points	0 almost no	0 almost nothing	0 no or irrelevant	0 almost no	0 no	0 almost no	0 irrelevant	0 very little	0 almost no	0 no	0 concise and correct or no questions asked -1 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1	1	1 very little	1 some main points	1 few	1 some	1 almost no	1 little	1 some	1 some	1 to some extent	1 almost no	
2	2	2 not all	2 main points	2 some	2 to important topics	2 some	2 partial	2 average	2 some correct	2 leading or cooperative	2 some	
		3 almost all	3 all relevant points	3 many	3 to most topics	3 reasonable	3 good	3 many	3 many correct	3 quite efficient	3 reasonable	
		4 all & efficiently	4 practically all points	4 practically all	4 + improvement suggestions	4 very good	4 new crucial point(s)	4 almost all	4 + improvement suggestions	4 very efficient	4 very good	

NOTES:

REVIEWER

Start from 1 and add/subtract
1 + 1 1/2 + 1 3/4 + 1 1/2 - 0 = 6

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 some relevant, sufficient number, could clear things out	0 poor	0 almost no	0 too few	0 irrelevant	0 no	0 poor	0 almost no	0 too few	0 irrelevant	0 no	0 concise and correct or no questions asked -1 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1	1	1 partial	1 too short/long	1 some	1 partially relevant	1 almost no	1 too short/long	1 too short/long	1 some	1 partially relevant	1 almost no	
2	2	2 good	2 relevant parts	2 many	2 mostly adequate	2 some	2 informative, apt	2 relevant parts	2 many	2 mostly adequate	2 some	
		3 detailed, complex	3 accurate, conclusive	3 + improvement suggestions	3 fully adequate	3 good	3 brief but accurate	3 accurate, conclusive	3 + improvement suggestions	3 fully adequate	3 good	

NOTES:

SCORESHEET

REPORTER ³

1 + ² + ² - ⁰ = ⁶

Start from 1 and add/subtract

stage:

reporter:

Poland

fight (round no.):

opponent:

Brazil

room:

reviewer:

Poland

problem no.:

14

Juror's name:

signature:

JENAPUR
Sawm

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	0 almost no	0 too few	0 no/ almost no	0 others' data, incorrectly cited	0 misunderstood	0 almost no	0 too few	0 almost no, chaotic	0 concise and correct or no questions asked -1 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1 some	1 some	1 some	1 some	1 review of sources, cited	1 partly	1 only technical	1 some	1 avoided some questions	
2 fair	2 fair	2 fair	2 not well fitting	2 some own input	2 average	2 some scientific	2 many	2 cooperated well	
3 good	3 good	3 well performed, sufficient number	3 qualitatively analysed	3 some interesting results	3 interesting solution	3 interesting points	3 + data/theory	3 answered directly to most questions	
4 detailed demonstrative	4 quite detailed, correct	4 + results explained	4 + theory limits explained, conclusive	4 considerable experimental or theoretical	4 some aspects above average	4 discussed	4 convincingly supported	4 efficient, productive	
5 deep and comprehensible, shows physical insight	5 detailed, complex, completely testable	5 + reproducible, convincing analysis	5 well fitting, deviations analysed, conclusive	5 considerable experimental and theoretical	5 greater extent than expected	5 brought in new physics	5 proved deep understanding		
6	6	6	6	6	6	6	6	6	

NOTES:

OPPONENT

1 + ¹ + ^{1.5} + ^{1.5} - ⁰ = ⁵

Start from 1 and add/subtract

QUESTIONS ASKED		POSITION (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	0	0 almost no	0 almost nothing	0 no or irrelevant	0 almost no	0 no	0 almost no	0 irrelevant	0 very little	0 almost no	0 almost no	0 concise and correct or no questions asked -1 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1 some relevant, aimed at resolving some unclear points	1	1 very little	1 some main points	1 few	1 some	1 almost no	1 little	1 some	1 some	1 to some extent	1 almost no	
2 short allowing short answers, prioritized, all time used	2	2 not all	2 main points	2 some	2 to important topics	2 some	2 partial	2 average	2 some correct	2 leading or cooperative	2 some	
	3	3 almost all	3 all relevant points	3 many	3 to most topics	3 reasonable	3 good	3 many	3 many correct	3 quite efficient	3 reasonable	
	4	4 all & efficiently	4 practically all points	4 practically all	4 + improvement suggestions	4 very good	4 new crucial point(s)	4 almost all	4 + improvement suggestions	4 very efficient	4 very good	

NOTES:

REVIEWER

1 + ¹ + ^{1.5} + ^{1.5} - ⁰ = ⁵

Start from 1 and add/subtract

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	0 poor	0 almost no	0 too few	0 irrelevant	0 no	0 poor	0 almost no	0 too few	0 irrelevant	0 no	0 concise and correct or no questions asked -1 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1 some relevant, sufficient number, could clear things out	1	1 partial	1 too short/long	1 some	1 partially relevant	1 almost no	1 too short/long	1 too short/long	1 some	1 partially relevant	1 almost no	
2 most time used, many unclear points resolved, aimed at both rep. and opp.	2	2 good	2 relevant parts	2 many	2 mostly adequate	2 some	2 informative, apt	2 relevant parts	2 many	2 mostly adequate	2 some	
3 +short, apt and clear, well prioritized time managed efficiently	3	3 detailed, complex	3 accurate, conclusive	3 + improvement suggestions	3 fully adequate	3 good	3 brief but accurate	3 accurate, conclusive	3 + improvement suggestions	3 fully adequate	3 good	

NOTES:

SCORESHEET

REPORTER

Start from 1 and add/subtract

$$1 + \boxed{2} + \boxed{2} - \boxed{0} = \boxed{5}$$

stage: 2

fight (round no.): 1

room: E

problem no.: 14

Juror's name: Mattias Andersen

reporter: Poland

opponent: Brazil

reviewer: Belarus

signature: A

REPORT

	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 solution
4			+ results explained	qualitatively analysed	considerable experimental or theoretical	some aspects above average
5	detailed demonstrative	quite detailed, correct	errors analysed	+ theory limits explained, conclusive	considerable experimental and theoretical	greater extent than expected
6	deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	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 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

$$1 + \boxed{0.5} + \boxed{1} + \boxed{1} - \boxed{0} = \boxed{4}$$

QUESTIONS ASKED

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

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

NOTES:

REVIEWER

Start from 1 and add/subtract

$$1 + \boxed{0.5} + \boxed{1} + \boxed{1} - \boxed{0} = \boxed{4}$$

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	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

NOTES:

SCORESHEET

REPORTER

Start from 1 and add/subtract

$$1 + 2.5 + 2.5 - 1 = 5$$

stage: 2

fight (round no.): 1

room: E

problem no.: 14

Juror's name: Michael Steile

reporter: Poland

opponent: Brazil

reviewer: Belarus

signature:

REPORT

	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

DISCUSSION WITH OPPONENT

	scientific contribution	relevant 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:

unclear what was compared

OPPONENT

Start from 1 and add/subtract

$$1 + 0.5 + 2 + 2 - 0.5 = 5$$

QUESTIONS ASKED

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

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

NOTES:

20s worked - hardly "clarifying" 3 questions

many more pressing matters

REVIEWER

Start from 1 and add/subtract

$$1 + 1 + 2 + 1 - 0.5 = 5$$

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	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

NOTES: Questions

?

?

?

SCORESHEET

REPORTER

Start from 1 and add/subtract

$$1 + \boxed{2} + \boxed{2} - \boxed{0} = \boxed{5}$$

stage: 2

fight (round no.): 1

room: E

problem no.: 14

Juror's name: Ojan Khutib-Danavandi

reporter: Poland

opponent: Brazil

reviewer: Belarus

signature: Ojan Khutib-Danavandi

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	0 — <input checked="" type="checkbox"/> concise and correct or no questions asked — some incorrect, inconclusive or too long -1 — some incorrect, inconclusive or too long -2 — deeply incorrect or show deep misconceptions
1 — some	<input checked="" type="checkbox"/> some	some	<input checked="" type="checkbox"/> some	review of sources, cited	partly	1 — only technical points cleared	some	avoided some questions	
2 — fair	fair	fair	not well fitting	some own input	average	2 — some scientific points cleared	<input checked="" type="checkbox"/> many	cooperated well	
3 — <input checked="" type="checkbox"/> good	good	<input checked="" type="checkbox"/> well performed, sufficient number	deviations qualitatively analysed	some interesting results	<input checked="" type="checkbox"/> interesting solution	3 — interesting points discussed	+ data/theory convincingly supported	answered directly to most questions	
4 — detailed demonstrative	quite detailed, correct	+ results explained errors analysed	+ theory limits explained, conclusive	considerable experimental or theoretical	some aspects above average	4 — brought in new physics	proved deep understanding	efficient, productive	
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				

NOTES: add explain model

OPPONENT

Start from 1 and add/subtract

$$1 + \boxed{1} + \boxed{2} + \boxed{2} - \boxed{0} = \boxed{6}$$

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	0 — almost no	irrelevant	very little	almost no	no	0 — <input checked="" type="checkbox"/> concise and correct or no questions asked — some incorrect, inconclusive or too long -1 — some incorrect, inconclusive or too long -2 — deeply incorrect or show deep misconceptions
1 — some relevant, aimed at resolving some unclear points		1 — very little	some main points	few	some	<input checked="" type="checkbox"/> almost no	1 — little	some	some	to some extent	<input checked="" type="checkbox"/> almost no	
2 — short allowing short answers, prioritized, all time used		2 — <input checked="" type="checkbox"/> not all	<input checked="" type="checkbox"/> main points	<input checked="" type="checkbox"/> some	<input checked="" type="checkbox"/> to important topics	some	2 — partial	average	<input checked="" type="checkbox"/> some correct	leading or cooperative	some	
		3 — almost all	all relevant points	many	to most topics	reasonable	3 — <input checked="" type="checkbox"/> good	<input checked="" type="checkbox"/> many	many correct	quite efficient	reasonable	
		4 — all & efficiently	practically all points	practically all	+ improvement suggestions	very good	4 — new crucial point(s)	almost all	+ improvement suggestions	very efficient	very good	

NOTES:

REVIEWER

Start from 1 and add/subtract

$$1 + \boxed{1} + \boxed{1.5} + \boxed{1} - \boxed{0} = \boxed{5}$$

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	0 — poor	almost no	too few	<input checked="" type="checkbox"/> irrelevant	no	0 — <input checked="" type="checkbox"/> concise and correct or no questions asked — some incorrect, inconclusive or too long -1 — some incorrect, inconclusive or too long -2 — deeply incorrect or show deep misconceptions
1 — some relevant, sufficient number, could clear things out		1 — partial	too short/long	<input checked="" type="checkbox"/> some	<input checked="" type="checkbox"/> partially relevant	<input checked="" type="checkbox"/> almost no	1 — <input checked="" type="checkbox"/> too short/long	too short/long	<input checked="" type="checkbox"/> some	partially relevant	<input checked="" type="checkbox"/> almost no	
2 — most time used, many unclear points resolved, aimed at both rep. and opp.		2 — <input checked="" type="checkbox"/> good	relevant parts	many	mostly adequate	some	2 — informative, apt	relevant parts	many	mostly adequate	some	
3 — +short, apt and clear, well prioritized time managed efficiently		3 — detailed, complex	accurate, conclusive	+ improvement suggestions	fully adequate	good	3 — brief but accurate	accurate, conclusive	+ improvement suggestions	fully adequate	good	

NOTES:

SCORESHEET

REPORTER

Start from 1 and add/subtract

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

stage: 3
reporter: Brazil

fight (round no.): 1
opponent: Belarus

room: E
reviewer: Poland

problem no.: 6

Juror's name: Yung-Yuan Hsu
signature: Yung-Yuan Hsu

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	0 almost no	0 too few	0 no/ almost no	others' data, incorrectly cited	misunderstood	0 almost no	0 too few	0 almost no, chaotic	<u>0</u> concise and correct or no questions asked -1 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1 some	1 some	1 some	1 some	review of sources, cited	partly	1 only technical	1 some	1 avoided some questions	
2 fair	2 fair	2 fair	2 not well fitting	some own input	average	2 some scientific	2 many	2 cooperated well	
3 good	3 good	3 well performed, sufficient number	3 deviations	some interesting results	interesting solution	3 interesting points	3 + data/theory	3 answered directly to most questions	
4 detailed demonstrative	4 quite detailed, correct	4 + results explained errors analysed	4 + theory limits explained, conclusive	considerable experimental or theoretical	some aspects above average	4 discussed	4 convincingly supported	4 efficient, productive	
6 deep and comprehensible, shows physical insight	6 detailed, complex, completely testable	6 + reproducible, convincing analysis	6 well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	6 brought in new physics	6 proved deep understanding	6	

NOTES: Theory is only fit to many stick limits & too few experiments.

OPPONENT

Start from 1 and add/subtract

$$1 + \boxed{1} + \boxed{2\frac{1}{4}} + \boxed{1\frac{3}{4}} - \boxed{0} = \boxed{6}$$

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	0	0 almost no	0 almost nothing	0 no or irrelevant	0 almost no	0 no	0 almost no	0 irrelevant	0 very little	0 almost no	0 no	<u>0</u> concise and correct or no questions asked -1 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1 some relevant, aimed at resolving some unclear points	1	1 very little	1 some main points	1 few	1 some	1 almost no	1 little	1 some	1 some	1 to some extent	1 almost no	
2 short allowing short answers, prioritized, all time used	2	2 not all	2 main points	2 some	2 to important topics	2 some	2 partial	2 average	2 some correct	2 leading or cooperative	2 some	
	3	3 almost all	3 all relevant points	3 many	3 to most topics	3 reasonable	3 good	3 many	3 many correct	3 quite efficient	3 reasonable	
	4	4 all & efficiently	4 practically all points	4 practically all	4 + improvement suggestions	4 very good	4 new crucial point(s)	4 almost all	4 + improvement suggestions	4 very efficient	4 very good	

NOTES: time control is not good (over time), but pointed out some points.

REVIEWER

Start from 1 and add/subtract

$$1 + \boxed{2} + \boxed{1\frac{1}{4}} + \boxed{1\frac{1}{4}} - \boxed{0} = \boxed{6}$$

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	0 poor	0 almost no	0 too few	0 irrelevant	0 no	0 poor	0 almost no	0 too few	0 irrelevant	0 no	<u>0</u> concise and correct or no questions asked -1 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1 some relevant, sufficient number, could clear things out	1	1 partial	1 too short/long	1 some	1 partially relevant	1 almost no	1 too short/long	1 too short/long	1 some	1 partially relevant	1 almost no	
2 most time used, many unclear points resolved, aimed at both rep. and opp.	2	2 good	2 relevant parts	2 many	2 mostly adequate	2 some	2 informative, apt	2 relevant parts	2 many	2 mostly adequate	2 some	
3 +short, apt and clear, well prioritized time managed efficiently	3	3 detailed, complex	3 accurate, conclusive	3 + improvement suggestions	3 fully adequate	3 good	3 brief but accurate	3 accurate, conclusive	3 + improvement suggestions	3 fully adequate	3 good	

NOTES:

SCORESHEET

REPORTER

Start from 1 and add/subtract

$$1 + 1.5 + 2 - 0 = 5$$

stage: 3

fight (round no.): 1

room: E

problem no.: 6

Juror's name: Ojan Khatib-Damavandi

reporter: Brazil

opponent: Belarus

reviewer: Poland

signature: Ojan Khatib-Damavandi

REPORT

	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	quite detailed, correct	+ results explained	+ theory limits explained, conclusive	considerable experimental or theoretical	some aspects above average
5	demonstrative	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected

DISCUSSION WITH OPPONENT

	scientific contribution	relevant 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: Theory not well stated. Details about relevant parameters missing

OPPONENT

Start from 1 and add/subtract

$$1 + 1 + 2 + 1.5 - 0.5 = 5$$

QUESTIONS ASKED

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

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

NOTES:

Discussion did not lead to satisfying answers

REVIEWER

Start from 1 and add/subtract

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

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

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

NOTES: Own opinions missing otherwise good

SCORESHEET

REPORTER

Start from 1 and add/subtract

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

stage: 3

fight (round no.): 1

room: E

problem no.: 00

Juror's name: Michael Steck

reporter: Brazil

opponent: Belarus

reviewer: Poland

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

NOTES:

very unclearly explained

theorie: unclear if own contribution

only "analytical" solution by Taylor?

OPPONENT

Start from 1 and add/subtract

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

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	0	0 almost no	0 almost nothing	0 no or irrelevant	0 almost no	0 no	0 almost no	0 irrelevant	0 very little	0 almost no	0 no	0 concise and correct or no questions asked -1 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1 some relevant, aimed at resolving some unclear points	1	1 very little	1 some main points	1 few	1 some	1 almost no	1 little	1 some	1 to some extent	1 almost no	1 almost no	
2 short allowing short answers, prioritized, all time used	2	2 not all	2 main points	2 some	2 to important topics	2 some	2 partial	2 average	2 some correct	2 leading or cooperative	2 some	
	3	3 almost all	3 all relevant points	3 many	3 to most topics	3 reasonable	3 good	3 many	3 many correct	3 quite efficient	3 reasonable	
	4	4 all & efficiently	4 practically all points	4 practically all	4 + improvement suggestions	4 very good	4 new crucial point(s)	4 almost all	4 + improvement suggestions	4 very efficient	4 very good	

NOTES:

sometimes unclear where questions are going, no good conclusions or points even though they are good points

REVIEWER

Start from 1 and add/subtract

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

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	0 poor	0 almost no	0 too few	0 irrelevant	0 no	0 poor	0 almost no	0 too few	0 irrelevant	0 no	0 concise and correct or no questions asked -1 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1 some relevant, sufficient number, could clear things out	1	1 partial	1 too short/long	1 some	1 partially relevant	1 almost no	1 too short/long	1 too short/long	1 some	1 partially relevant	1 almost no	
2 most time used, many unclear points resolved, aimed at both rep. and opp.	2	2 good	2 relevant parts	2 many	2 mostly adequate	2 some	2 informative, apt	2 relevant parts	2 many	2 mostly adequate	2 some	
3 +short, apt and clear, well prioritized time managed efficiently	3	3 detailed, complex	3 accurate, conclusive	3 + improvement suggestions	3 fully adequate	3 good	3 brief but accurate	3 accurate, conclusive	3 + improvement suggestions	3 fully adequate	3 good	

NOTES:

"has some flaws." ← which?

↑ not expressed in questions, also not later?

↑ no "traditional" discussion of discussion points analysis

SCORESHEET

REPORTER

Start from 1 and add/subtract

$$1 + \boxed{3} + \boxed{2.5} - \boxed{0.25} = \boxed{6}$$

stage: 3

fight (round no.): 1

room: E

problem no.: 6

Juror's name: Mattias Andersson

reporter: Brazil

opponent: Belarus

reviewer: Poland

signature: [Signature]

REPORT

	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	quite detailed, correct	+ results explained	+ theory limits explained, conclusive	considerable experimental or theoretical	some aspects above average
5	demonstrative		errors analysed	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected
6	deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis			

DISCUSSION WITH OPPONENT

	scientific contribution	relevant 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

$$1 + \boxed{0.75} + \boxed{2} + \boxed{2.5} - \boxed{0} = \boxed{6}$$

QUESTIONS ASKED

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

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

NOTES:

REVIEWER

Start from 1 and add/subtract

$$1 + \boxed{1.5} + \boxed{2} + \boxed{2} - \boxed{0} = \boxed{6}$$

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

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

NOTES:

SCORESHEET

REPORTER

Start from 1 and add/subtract
1 + ~~2.5~~ + 1.5 - 0 = 5

stage: 1

fight (round no.): 3

room: E

problem no.: 6










Juror's name: Sue NAPIER

reporter: Brazil

opponent: Beljan

reviewer: Poland

signature: SANCHEZ

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	0  concise and correct or no questions asked -1  some incorrect, inconclusive or too long -2  deeply incorrect or show deep misconceptions
1	some	some	some	some	review of sources, cited	partly	1	only technical points cleared	some	avoided some questions	
2	 fair	 fair	 fair	not well fitting	some own input	 average	2	 some scientific points cleared	many	 cooperated well	
3	good	good	well performed, sufficient number	deviations qualitatively analysed	some interesting results	interesting solution	3	interesting points discussed	+ data/theory convincingly supported	answered directly to most questions	
4	detailed demonstrative	quite detailed, correct	+ results explained	+ theory limits explained, conclusive	considerable experimental or theoretical	some aspects above average	4	brought in new physics	proved deep understanding	efficient, productive	
6	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					

NOTES:

OPPONENT

Start from 1 and add/subtract
1 + 1 + 2.5 + 3 - 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	prioritisation	scientific contribution	relevance of topics	own opinions presented	efficiency	prioritisation		
0	almost no, irrelevant	0	almost no	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	1	very little	some main points	few	some	almost no	1	little	some	some	to some extent	almost no
2	short allowing short answers, prioritized, all time used	2	not all	main points	some	to important topics	some	2	partial	average	some correct	leading or cooperative	some
		3	almost all	all relevant points	many	to most topics	reasonable	3	good	many	many correct	quite efficient	reasonable
		4	all & efficiently	practically all points	practically all	+ improvement suggestions	very good	4	new crucial point(s)	almost all	+ improvement suggestions	very efficient	very good

NOTES:

0 — concise and correct or no questions asked

1 — some incorrect, inconclusive or too long

2 — deeply incorrect or show deep misconceptions

NOTES:

REVIEWER

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

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

NOTES:

