

**SCORESHEET**

stage: 5  
 reporter: Roland  
 opponent: Hungary  
 room: F  
 problem no.: 13  
 juror's name: *Janice Mann*  
 signature: *[Signature]*

REPORTER

Start from 1 and add/subtract

1 + 3.5 + 2.5 = 7.5 = 8

NOTES:

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

DISCUSSION WITH OPPONENT

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

ANSWERS TO JURY

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

OPPONENT

Start from 1 and add/subtract

1 + 1.5 + 2.5 + 3 = 8

NOTES:

4	time used	all & almost all	practically all points	practically all points	efficiently
3	some unclear points	not all	all relevant points	all relevant points	reasonably
2	short allowing short answers, prioritized, all time used	very little	some main points	main points	to most topics
1	some relevant, aimed at resolving	almost no	presentation	relevant topics	to important topics
0	almost no, irrelevant	almost no	almost nothing	no or irrelevant	some
	understanding of relevant topics	correct own	relevant topics	addressed	options expressed
	priority	priority	priority	priority	priority

DISCUSSION WITH REPORTER

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

ANSWERS TO JURY and

0	concise and correct or
-1	questions asked
-1	some incorrect,
-1	inconclusive or too long
-2	deeply incorrect or show
-2	deep misconceptions

REVIEWER

Start from 1 and add/subtract

1 + 1.5 + 0.5 + 0.5 = 3.5 = 4

QUESTIONS ASKED

3	time managed efficiently	3	detailed, complex	3	brief but accurate	3	accurate, conclusive	3	improvement	3	fully	3	adequate	3	good
2	+short, apt and clear, well prioritized	2	good	2	informative, apt	2	relevant parts	2	many	2	mostly adequate	2	some	2	some
1	most time used, many unclear points	1	partial	1	too short/long	1	too short/long	1	some	1	partially relevant	1	almost no	1	some incorrect,
0	clear things out	0	poor	0	poor	0	almost no	0	too few	0	irrelevant	0	no	0	no questions asked
	some relevant, sufficient number, could		report summary & understanding		speech summary		discussion		own opinions		pros & cons		priority		concise and correct or
	too few, mostly irrelevant		priority		analysis		analysis		discussion		analysis		priority		no questions asked

REVIEW OF REPORT

REVIEW OF OPPOSITION

ANSWERS TO JURY

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

NOTES:

**SCORESHEET**

REPORTER  
Start from 1 and add/subtract  
 $1 + 3 + 2.5 - \square = 6$

stage: 3  
reporter: Poland

fight (round no.): 2  
opponent: Hungary

room: F  
reviewer: Azerbayzon

juror's name: Shketalik  
signature: *[Signature]*

problem no.: 13

**REPORT**

**NOTES:**

0	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	task fulfillment
1	almost no	almost no	some	no/almost no	misunderstood
2	some	fair	fair	some	partly
3	good	good	well performed, sufficient number	not well fitting deviations	average interesting results
4	detailed	quite detailed, correct	+ results explained	qualitatively analysed	interesting solution
5	demonstrative	detailed, complex, correct	errors analysed	+ theory limits explained, conclusive	some aspects
6	deep and comprehensive, shows physical insight	completely testable	+ reproducible, convincing analysis	well fitting deviations analysed, conclusive	greater extent than expected

**DISCUSSION WITH OPONENT**

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

**OPONENT**

Start from 1 and add/subtract  
 $1 + 1 + 2.5 + 2.5 - \square = 7$

**NOTES:**

0	almost no, irrelevant	time used	understanding of relevant topics	correct own options expressed	priority
1	almost no	almost no	no or irrelevant	almost no	no
2	very little	some main points	few	some	little
3	almost all	all relevant points	many	to most topics	good
4	efficiently	practically all points	practically all	+ improvement	new crucial points

**DISCUSSION WITH REPORTER**

0	no	almost no	to some extent	no	priority
1	some	some	some	irrelevant	very little
2	some correct	many correct	leading or cooperative	some correct	quite efficient
3	many	many	many correct	many	very efficient
4	+ improvement	almost all	suggestions	very efficient	very good

**QUESTIONS ASKED**

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

**REVIEW OF REPORT**

0	poor	almost no	too few	irrelevant	no
1	partial	too short/long	some	partially relevant	almost no
2	some	relevant parts	many	mostly adequate	some
3	detailed, complex	accurate, + improvement	fully	good	good

**REVIEW OF OPPOSITION**

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

**REVIEWER**

Start from 1 and add/subtract  
 $1 + 1.5 + 1.25 + 1.25 - \square = 5$

**QUESTIONS ASKED**

0	too few, mostly irrelevant	report summary & understanding	discussion analysis	own opinions	pros & cons	priority
1	clear things out	poor	almost no	too few	irrelevant	no
2	resolved, aimed at both rep. and opp.	some	partially relevant	mostly adequate	some	some
3	+short, apt and clear, well prioritized	detailed, complex	accurate, + improvement	fully	good	good

**NOTES:**

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

**SCORESHEET**

stage: 2  
 reporter: *Bohary Krip Kundak*  
 opponent: *Humayun 52 Akhly*  
 fight (round no.): 3  
 room: F  
 reviewer: *AKSHAYAN IMRANOV*  
 problem no.: 13  
 juror's name: *Ryan H Lin*  
 signature: *Ryan H Lin*

REPORT	phenomenon	theory/model	experiments	relevant	comparison between	own contribution	task fulfillment
0	almost no explanation	almost no theory/model	too few experiments	no/almost no relevant	no/almost no comparison between	others' data, incorrectly cited	misunderstood
1	some explanation	fair theory/model	some experiments	fair relevant	some comparison between	review of sources, cited	partly
2	some explanation	fair theory/model	some experiments	fair relevant	some comparison between	review of sources, cited	partly
3	good explanation	good theory/model	well performed, sufficient number of experiments	well performed, sufficient number of relevant	deviations quite interestingly analysed	some own input	average
4	detailed explanation	quite detailed theory/model	well performed, sufficient number of experiments	well performed, sufficient number of relevant	deviations quite interestingly analysed	some own input	interesting
5	demonstrative explanation	quite detailed theory/model	well performed, sufficient number of experiments	well performed, sufficient number of relevant	deviations quite interestingly analysed	some own input	interesting
6	deep and comprehensive explanation	detailed, complex, convincing analysis	well fitting, deviations analysed, conclusive	well fitting, deviations analysed, conclusive	explained, conclusive	explained, conclusive	greater extent than expected

DISCUSSION WITH OPPONENT	relevant arguments/responses	scientific contribution	efficiency
0	almost no relevant arguments/responses	almost no scientific contribution	almost no efficiency
1	some relevant arguments/responses	only technical points cleared	avoided some questions
2	many relevant arguments/responses	some scientific points cleared	cooperated well
3	many relevant arguments/responses	some scientific points cleared	cooperated well
4	proved deep understanding	brought in new physics	answered directly to most questions

DISCUSSION WITH REPORTER	relevance of topics presented	own options	efficiency	prioritisation
0	almost no relevance of topics presented	almost no own options	almost no efficiency	almost no prioritisation
1	little relevance of topics presented	some own options	to some extent efficiency	almost no prioritisation
2	partial relevance of topics presented	average own options	leading or cooperative efficiency	some prioritisation
3	good relevance of topics presented	many own options	quite efficient efficiency	reasonable prioritisation
4	new crucial points	almost all suggestions	very efficient efficiency	very good prioritisation

REVIEWER	QUESTIONS ASKED	OPPOSITION (SPEECH)	ANSWERS TO JURY and REVIEWER'S QUESTIONS
1 + 1.5 + 1.5 + 1.5 = 5.5	0 -> almost no, irrelevant 1 -> some relevant, aimed at resolving short allowing short answers, prioritized, all time used	0 -> almost no 1 -> some main points 2 -> to important topics 3 -> reasonable 4 -> very good	0 -> concise and correct or no questions asked 1 -> some incorrect, inconclusive or too long 2 -> deeply incorrect or show deep misconceptions

REVIEWER	QUESTIONS ASKED	REVIEW OF REPORT	REVIEW OF OPPOSITION	ANSWERS TO JURY
1 + 1.5 + 1.5 + 1.5 = 5.5	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	0 -> poor 1 -> almost no 2 -> too short/long 3 -> good 4 -> detailed, complex, accurate, + improvement	0 -> almost no 1 -> too few 2 -> many 3 -> accurate, + improvement 4 -> brief but accurate	0 -> concise and correct or no questions asked 1 -> some incorrect, inconclusive or too long 2 -> deeply incorrect or show deep misconceptions

**SCORESHEET**

REPORTER  
 1 + 3/5 + 2/5 - 0 = 7  
 Start from 1 and add/subtract

stage: Poland

fight (round no.): 2  
 opponent: Hungary

room: F  
 reviewer: Azerbaijan  
 problem no.: 13

Jury's name: Krup-KarHaj  
 signature: Krup-KarHaj

**REPORT**

0	phenomenon explanation	theory/model	experiments	relevant	comparison between theory and experiment	no/almost no others' data, incorrectly cited	misunderstood	partly	average	interesting	points cleared	only technical	almost no contribution	scientific arguments/responses	relevant	too few	some	avoided some questions	almost no, chaotic	efficiency
1	some	some	fair	fair	some	review of sources, cited	partly	partly	average	interesting	points cleared	only technical	almost no contribution	scientific arguments/responses	relevant	too few	some	avoided some questions	almost no, chaotic	efficiency
2	some	some	well performed	well performed	not well fitting	some own input	average	interesting	average	interesting	points cleared	only technical	almost no contribution	scientific arguments/responses	relevant	too few	some	avoided some questions	almost no, chaotic	efficiency
3	good	good	well performed	well performed	not well fitting	some own input	average	interesting	average	interesting	points cleared	only technical	almost no contribution	scientific arguments/responses	relevant	too few	some	avoided some questions	almost no, chaotic	efficiency
4	detailed	detailed	quite detailed, errors analysed	quite detailed, errors analysed	qualitatively analysed	some interesting results	interesting	interesting	interesting	points cleared	points cleared	points cleared	points cleared	points cleared	points cleared	points cleared	points cleared	points cleared	points cleared	points cleared
5	demonstrative	demonstrative	quite detailed, correct	quite detailed, correct	explained, conclusive	considerable experimental or theoretical	some aspects	some aspects	above average	discussed	discussed	discussed	discussed	discussed	discussed	discussed	discussed	discussed	discussed	discussed
6	deep and comprehensive	deep and comprehensive	convincing analysis	convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	greater extent than expected	greater extent than expected	greater extent than expected	greater extent than expected	greater extent than expected	greater extent than expected	greater extent than expected	greater extent than expected	greater extent than expected	greater extent than expected	greater extent than expected	greater extent than expected	greater extent than expected

**NOTES:**

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

**NOTES:**

OPONENT  
 1 + 1/5 + 2/5 - 0 = 7  
 Start from 1 and add/subtract

0	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
1	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no
2	some	some	some	some	some	some	some	some	some	some	some	some	some	some	some	some	some	some	some	some
3	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable	reasonable
4	very good	very good	very good	very good	very good	very good	very good	very good	very good	very good	very good	very good	very good	very good	very good	very good	very good	very good	very good	very good

0	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant	too few, mostly irrelevant
1	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out	clear things out
2	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.	most time used, many unclear points resolved, aimed at both rep. and opp.
3	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently	time managed efficiently

**NOTES:**

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

0	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
1	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no
2	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant
3	good	good	good	good	good	good	good	good	good	good	good	good	good	good	good	good	good	good	good	good

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

0	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
1	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant	irrelevant
2	too few	too few	too few	too few	too few	too few	too few	too few	too few	too few	too few	too few	too few	too few	too few	too few	too few	too few	too few	too few
3	fully	fully	fully	fully	fully	fully	fully	fully	fully	fully	fully	fully	fully	fully	fully	fully	fully	fully	fully	fully

REVIEW OF OPPOSITION  
 0 speech summary  
 1 almost no analysis  
 2 discussion  
 3 own opinions  
 4 pros & cons  
 5 prioritisation

0	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
1	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no	almost no
2	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant	partially relevant
3	good	good	good	good	good	good	good	good	good	good	good	good	good	good	good	good	good	good	good	good


REVIEW OF REPORT  
 0 report summary & understanding  
 1 almost no analysis  
 2 discussion  
 3 own opinions  
 4 pros & cons  
 5 prioritisation

ANSWERS TO JURY  
 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  
1 +  +  -  =

stage: 3  
reporter: Poland  
opponent: Hungary  
reviewer: A Zerbajian  
room: F  
problem no.: 13

Juror's name: A. Hamouki  
signature: 

REPORT		DISCUSSION WITH OPPONENT				DISCUSSION WITH REPORTER				ANSWERS TO JURY			
0	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	task fulfillment	own contribution	scientific contribution	relevant arguments/responses	efficiency	almost no, chaotic	avoided some questions	no questions asked	0
1	almost no	almost no	some	no/almost no	misunderstood	almost no	only technical	too few	some	some	cooperated well	no questions asked	0
2	fair	fair	some	not well fitting	average	points cleared	some scientific	many	many	many	cooperated well	no questions asked	0
3	good	good	well performed, sufficient number	deviations	interesting	points cleared	some scientific	many	many	many	cooperated well	no questions asked	0
4	detailed	quite detailed,	errors analysed	+ results explained	+ theory limits	interesting points	discussed	convincingly supported	+ data/theory	answered directly	to most questions	inconclusive or too long	-1
5	demonstrative	detailed, complex,	well fitting, deviations	analysed, conclusive	considerable experimental	above average	discussed	convincingly supported	proved deep	efficient,	productive	deeply incorrect or show	-2
6	shows physical insight	deep and comprehensible,	convincing analysis	well fitting, deviations	considerable experimental	greater extent	brought in new	understanding	productivity	deeply incorrect or show	deep misconceptions	deeply incorrect or show	-2

NOTES:

QUESTIONS ASKED		OPPOSITION (SPEECH)				DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS		
0	almost no, irrelevant	time used	understanding of relevant topics	correct own opinions expressed	priority	scientific contribution of topics	relevance	own opinions presented	efficiency	priority	conclude and correct or no	0
1	some unclear points	very little	some main points	few	almost no	little	some	to some extent	almost no	almost no	questions asked	0
2	short allowing short answers, prioritized, all time used	not all	main points	to important topics	some	partial	average	some correct	leading or cooperative	some	some incorrect,	-1
3	almost all	all relevant points	many	to most topics	reasonable	good	many	many correct	quite efficient	reasonable	inconclusive or too long	-1
4	efficiently	practically all points	practically all	+ improvement	very good	new crucial points	almost all	suggestions	very efficient	very good	deeply incorrect or show	-2

NOTES:

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

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

NOTES:

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

**SCORESHEET**

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

stage: 2  
reporter: Azerbaijan  
opponent: Poland  
fight (round no.): 2  
room: 7  
reviewer: Hungary  
problem no.: 9  
juror's name: (ung-juandisa)  
signature: Jung-juandisa

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

NOTES:

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

QUESTIONS ASKED		DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS	
time used	understanding of relevant topics	correct own options expressed	relevant topics addressed	scientific relevance	own opinions presented	efficiency	prioritisation
0	almost no	almost no	no or irrelevant	almost no	very little	almost no	no
1	very little	some	few	some	some	to some extent	almost no
2	not all	some main points	some	little	some correct leading or cooperative	to some extent	some
3	almost all	all relevant points	many	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 + 3 + 2 = 6

QUESTIONS ASKED		REVIEW OF REPORT				REVIEW OF OPPOSITION				ANSWERS TO JURY	
time managed efficiently	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	too few, mostly irrelevant	poor	almost no	irrelevant	no	summary	analysis	too few	irrelevant	no	concise and correct or no questions asked
1	clear things out	poor	too few	too few	poor	almost no	analysis	too few	irrelevant	no	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	almost no	too short/long	too short/long	some	partially relevant	almost no	some incorrect, inconclusive or too long
3	short, apt and clear, well prioritized	good	relevant parts	mostly adequate	some	informative, apt	relevant parts	many	mostly adequate	some	deeply incorrect or show deep misconceptions

NOTES:

## SCORESHEET

stage: 2  
 reporter: AZERBAIJAN  
 opponent: ROYALD  
 fight (round no.): 2  
 room: F  
 problem no.: HUNGARY  
 reviewer: BARTEK LEJWANDOWSKI  
 Balazs NORBERT Nagy  
 Juror's name: RAO H. LIAO  
 signature: *Rao H. Liao*

1 + 1 = 2  
 Start from 1 and add/subtract  
 3

REPORT

NOTES: ↑

6	shows physical insight
5	deep and comprehensive
4	detailed
3	good
2	fair
1	almost no
0	phenomenon

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

OPPOSITION (SPEECH)

NOTES: ↑

ANSWERS TO JUROR and REVIEWER'S QUESTIONS	prioritisation	time used	understanding of	relevant topics	correct own	prioritisation	0	no	almost no	some	few	some main points	almost no	very little	some relevant, aimed at resolving
		almost no	presentation	addressed	options expressed	almost no									
ANSWERS TO JUROR and REVIEWER'S QUESTIONS	efficiency	all &	all relevant points	many	to most topics	reasonable	1	partial	average	some correct	leading or cooperative	quite efficient	reasonable	very good	some unclear points
		very little	some main points	many	to important topics	some	some	some	some	some	some	some	some	some	some unclear points
ANSWERS TO JUROR and REVIEWER'S QUESTIONS	efficiency	practically all points	practically all	practically all	practically all	very good	2	new crucial	many	many correct	many correct	many correct	many correct	very efficient	short allowing short answers, prioritized, all time used
		efficiently	practically all points	practically all	practically all	very good	4	new crucial	many	many correct	many correct	many correct	many correct	very efficient	short allowing short answers, prioritized, all time used

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

QUESTIONS ASKED

NOTES: ↑

QUESTIONS ASKED	0	too few, mostly irrelevant	report summary & understanding	discussion	own opinions	pros & cons	prioritisation	0	no	irrelevant	too short/long	almost no	analysis	speech summary	discussion	own opinions	pros & cons	prioritisation	0	concise and correct or no questions asked
		clear things out	poor	almost no	too few	irrelevant	no													
QUESTIONS ASKED	1	some relevant, sufficient number, could	report summary & understanding	discussion	own opinions	pros & cons	prioritisation	1	poor	almost no	too short/long	almost no	analysis	speech summary	discussion	own opinions	pros & cons	prioritisation	1	concise and correct or no questions asked
		most time used, many unclear points	poor	almost no	too few	irrelevant	almost no													
QUESTIONS ASKED	2	resolved, aimed at both rep. and opp.	report summary & understanding	discussion	own opinions	pros & cons	prioritisation	2	poor	almost no	too short/long	almost no	analysis	speech summary	discussion	own opinions	pros & cons	prioritisation	2	some incorrect, inconclusive or too long
		most time used, many unclear points	poor	almost no	too few	irrelevant	almost no													
QUESTIONS ASKED	3	time managed efficiently	report summary & understanding	discussion	own opinions	pros & cons	prioritisation	3	poor	almost no	too short/long	almost no	analysis	speech summary	discussion	own opinions	pros & cons	prioritisation	3	deeply incorrect or show deep misconceptions
		resolved, aimed at both rep. and opp.	poor	almost no	too few	irrelevant	almost no													

1 + 2 = 3  
 Start from 1 and add/subtract  
 2.5

ANSWERS TO JUROR

NOTES: ↑

ANSWERS TO JUROR	0	concise and correct or no questions asked	report summary & understanding	discussion	own opinions	pros & cons	prioritisation	0	no	irrelevant	too short/long	almost no	analysis	speech summary	discussion	own opinions	pros & cons	prioritisation	0	concise and correct or no questions asked
		clear things out	poor	almost no	too few	irrelevant	no													
ANSWERS TO JUROR	1	some incorrect, inconclusive or too long	report summary & understanding	discussion	own opinions	pros & cons	prioritisation	1	poor	almost no	too short/long	almost no	analysis	speech summary	discussion	own opinions	pros & cons	prioritisation	1	some incorrect, inconclusive or too long
		most time used, many unclear points	poor	almost no	too few	irrelevant	almost no													
ANSWERS TO JUROR	2	resolved, aimed at both rep. and opp.	report summary & understanding	discussion	own opinions	pros & cons	prioritisation	2	poor	almost no	too short/long	almost no	analysis	speech summary	discussion	own opinions	pros & cons	prioritisation	2	some incorrect, inconclusive or too long
		most time used, many unclear points	poor	almost no	too few	irrelevant	almost no													
ANSWERS TO JUROR	3	time managed efficiently	report summary & understanding	discussion	own opinions	pros & cons	prioritisation	3	poor	almost no	too short/long	almost no	analysis	speech summary	discussion	own opinions	pros & cons	prioritisation	3	deeply incorrect or show deep misconceptions
		resolved, aimed at both rep. and opp.	poor	almost no	too few	irrelevant	almost no													

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

SCORESHEET  
stage: 2  
reporter: Azerb.  
opponent: Roland  
reviewer: Hungary  
fight (round no.): 2  
room: F  
problem no.: 9  
Juror's name: Shchetnik  
signature: [Signature]

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

QUESTIONS ASKED	almost no, irrelevant	some relevant, aimed at resolving	time used	understanding of relevant topics	correct own options expressed	prioritisation
	short allowing short answers, prioritized, all time used	some unclear points	very little	some main points	to important topics	reasonable
2	almost all	almost all	all relevant points	practically all	to most topics	reasonable
3	all & efficiently	practically all points	practically all points	practically all	+ improvement suggestions	very good
4	all & efficiently	practically all points	practically all points	practically all	+ improvement suggestions	very good

OPONENT  
Start from 1 and add/subtract  
1 + 1 - 1 = 5

QUESTIONS ASKED	too few, mostly irrelevant	report summary & understanding	discussion analysis	own opinions	pros & cons	prioritisation
	clear things out	some relevant, sufficient number, could	most time used, many unclear points	resolved, aimed at both rep. and opp.	+short, apt and clear, well prioritized	time managed efficiently
0	almost no, irrelevant	almost no	almost no	too few	irrelevant	no
1	poor	poor	poor	almost no	irrelevant	no
2	poor	poor	poor	almost no	irrelevant	no
3	poor	poor	poor	almost no	irrelevant	no

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

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

NOTES:



**SCORESHEET**

REPORTER  
 1 + 1 + 0.5 - 0 = 3  
 Start from 1 and add/subtract

stage: 2  
 reporter: Azerbaijan opponent: Poland  
 room: F  
 reviewer: Hungary  
 problem no.: 9  
 juror's name: A. MANGIKA  
 signature:

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

6	deep and comprehensive	shows physical insight
5	detailed	demonstrative
4	detailed	quite detailed, correct
3	good	well performed, sufficient number
2	fair	fair
1	some	some
0	almost no	almost no
	phenomenon explanation	theory/model

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

4	time used	almost no	presentation	relevant topics	correct own	scientific relevance	own opinions	efficiency
3	almost all	X all & efficiently	X all relevant points	practically all points	practically all	+ improvement	practically all	very good
2	not all	very little	some main points	few	some	to important topics	some	reasonable
1	some unclear points	almost no	almost nothing	no or irrelevant	almost no	some	little	almost no
0	almost no, irrelevant	almost no, resolving	some unclear points	short allowing short answers, prioritized, all time used	some unclear points	some	very little	almost no
	QUESTIONS ASKED	DISCUSSION WITH REPORTER	DISCUSSION WITH REPORTER	DISCUSSION WITH REPORTER	DISCUSSION WITH REPORTER	DISCUSSION WITH REPORTER	DISCUSSION WITH REPORTER	DISCUSSION WITH REPORTER

4	new crucial point(s)	almost all	all suggestions	very efficient
3	good	X many	many correct	X quite efficient
2	partial	average	some correct	leading or cooperative
1	little	some	some	to some extent
0	almost no	almost no	almost no	almost no
	QUESTIONS ASKED	DISCUSSION WITH REPORTER	DISCUSSION WITH REPORTER	DISCUSSION WITH REPORTER

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  
 1 + 2.5 + 3 + 2.5 - 0 = 9  
 Start from 1 and add/subtract

3	report summary & understanding	poor	almost no	discussion analysis	speech summary	discussion analysis	own opinions	pros & cons	prioritisation
2	resolved, aimed at both rep. and opp.	partial	too short/long	too short/long	too short/long	too short/long	some	partially relevant	almost no
1	most time used, many unclear points	good	relevant parts	relevant parts	relevant parts	many	many	mostly adequate	some
0	too few, mostly irrelevant	poor	almost no	almost no	almost no	too few	too few	irrelevant	no
	QUESTIONS ASKED	REVIEW OF REPORT	REVIEW OF REPORT	REVIEW OF REPORT	REVIEW OF REPORT	REVIEW OF REPORT	REVIEW OF REPORT	REVIEW OF REPORT	REVIEW OF REPORT

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

ANSWERS TO JURY  
 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: 2      reporter: Azarbaijan      opponent: Poland      fight (round no.): 2      room: F      problem no.: 9      juror's name: *Barbara Sklar*      signature: *[Signature]*

REPORTER      1 + 0.5 = 0.5

Start from 1 and add/subtract

REPORT	phenomenon	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment
0	almost no explanation	almost no theory/model	too few experiments	no/almost no others' data, incorrectly cited	misunderstood	0
1	some	some	some	not well fitting	partly	1
2	fair	fair	well performed, fair	deviations	average	2
3	good	good	sufficient number, quite detailed, errors analysed	qualitatively analysed	interesting solution	3
4	detailed	detailed, complex, reproducible,	+ results explained	+ theory limits	discussed	4
5	demonstrative	correct	convincing analysis	well fitting, deviations analysed, conclusive	convincingly supported	5
6	shows physical insight	completely testable	convincing analysis	analysed, conclusive	proven deep understanding	6

DISCUSSION WITH OPPONENT	scientific contribution	relevant arguments/responses	efficiency
0	almost no scientific contribution	too few relevant arguments/responses	almost no, chaotic
1	only technical	some	avoided some questions
2	some scientific	many	cooperated well
3	interesting points	+ data/theory	answered directly
4	brought in new physics	proven deep understanding	efficient, productive

NOTES:

OPPONENT      1 + 1 + 2 + 3 = 7

Start from 1 and add/subtract

DISCUSSION WITH REPORTER	scientific contribution of topics	relevance of topics	own opinions presented	efficiency	prioritisation
0	almost no scientific contribution	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 suggestions	+ improvement	very efficient	very good

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

NOTES:

REVIEWER      1 + 2.5 + 2 + 2.5 = 8

Start from 1 and add/subtract

REVIEW OF REPORT	report summary & analysis	discussion	own opinions	pros & cons	prioritisation
0	almost no report summary	almost no discussion	too few own opinions <td>irrelevant pros &amp; cons <td>no</td> </td>	irrelevant pros & cons <td>no</td>	no
1	poor	poor	too short/long	partially relevant	almost no
2	informative, apt	relevant parts	many	mostly adequate	some
3	brief but accurate	conclusive, accurate, + improvement	adequate	fully	good

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

NOTES:

ANSWERS TO JURY QUESTIONS

0 concise and correct or no questions asked

1 clear things out

2 most time used, many unclear points resolved, aimed at both rep. and opp.

3 +short, apt and clear, well prioritized

4 time managed efficiently

QUESTIONS ASKED

0 too few, mostly irrelevant

1 some relevant, sufficient number, could

2 most time used, many unclear points resolved, aimed at both rep. and opp.

3 +short, apt and clear, well prioritized

4 time managed efficiently

ANSWERS TO JURY and REVIEWER'S QUESTIONS

0 concise and correct or no questions asked

1 some incorrect, questions asked

2 some incorrect, inconclusive or too long

3 deeply incorrect or show deep misconceptions

DISCUSSION WITH REPORTER

0 almost no scientific contribution of topics

1 little

2 partial

3 good

4 new crucial point(s)

OPPOSITION (SPEECH)

0 almost no correct own opinions expressed

1 some

2 to important topics

3 to most topics

4 + improvement

QUESTIONS ASKED

0 almost no, irrelevant

1 some relevant, aimed at resolving

2 short allowing short answers, prioritized, all time used

3 almost all

4 all & efficiently

# SCORESHEET

stage: 1  
 reporter: *H. Hergang*  
 opponent: *Conrad*  
 fight (round no.): 2  
 room: F  
 problem no.: 16  
 juror's name: *Stavica Duh*  
 signature: *[Signature]*

REPORTER  
 Start from 1 and add/subtract  
 $1 + 4 + 3 - 0 = 8$

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	not well fitting	review of sources, cited	partly
2	fair	fair	good	well performed, sufficient number	some interesting results	interesting
3	good	good	quite detailed, correct	+ results explained + theory limits	debatable experimental	clear solution
4	detailed	demonstrative	detailed, complex, reproducible, errors analysed	explained, conclusive	considerable experimental	points cleared
5	demonstrative	quite detailed, correct	convincing analysis, + reproducible, well fitting, deviations	convincing analysis	considerable experimental	some scientific points cleared
6	deep and comprehensible, shows physical insight	detailed, complex, completely testable	shows physical insight	convincing analysis, + reproducible, well fitting, deviations	convincing analysis, + data/theory	interesting points brought in new physics

ANSWERS TO JURY, OPONENT and REVIEWER'S QUESTIONS

0 concise and correct or no questions asked  
 1 avoided some questions  
 2 cooperated well  
 3 answered directly to most questions  
 4 efficient, productive  
 5 deep misconceptions or show deeply incorrect or too long  
 6 deep misconceptions

OPONENT  
 Start from 1 and add/subtract  
 $1 + 1 + 1 + 2 = 5$

QUESTIONS ASKED	time used	presentation of relevant topics	addressed options expressed	correct own	priority
0	almost no, irrelevant	almost no	almost no	no or irrelevant	no
1	very little	some main points	few	some	almost no
2	not all	some main points	some	to important topics	little
3	almost all	all relevant points	many	to most topics	average
4	all & efficiently	practically all points	practically all	+ improvement	many correct

ANSWERS TO JURY and REVIEWER'S QUESTIONS

0 concise and correct or no questions asked  
 1 some unclear points  
 2 short allowing short answers, prioritized, all time used  
 3 almost all  
 4 all & efficiently

REVIEWER  
 Start from 1 and add/subtract  
 $1 + 2 + 1 + 1.5 = 5.5$

QUESTIONS ASKED	report summary & understanding	discussion analysis	own opinions	pros & cons	priority
0	too few, mostly irrelevant	almost no	too few	irrelevant	no
1	clear things out	poor	almost no	partially relevant	almost no
2	resolved, aimed at both rep. and opp.	partial	too short/long	some	partially relevant
3	most time used, many unclear points	good	relevant parts	many	mostly adequate
4	+short, apt and clear, well prioritized	detailed, accurate, complex	accurate, conclusive, + improvement	fully	adequate

ANSWERS TO JURY

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

NOTES:

NOTES:

NOTES:

**SCORESHEET**

stage: 1  
 reporter: Hungary  
 fight (round no.): 2  
 opponent: Azerb.  
 room: F  
 reviewer: Poland  
 problem no.: 16  
 juror's name: Shchetnikov  
 signature:

REPORTER  
 Start from 1 and add/subtract  
 $1 + 4 + 3 - 1 = 7$

REPORT

NOTES:

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

ANSWERS TO JURY, OPONENT 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  
 3 ——— some incorrect, inconclusive or too long  
 4 ——— some incorrect, inconclusive or too long  
 5 ——— some incorrect, inconclusive or too long  
 6 ——— some incorrect, inconclusive or too long

DISCUSSION WITH REPORTER

NOTES:

time used	0	1	2	3	4
almost no, irrelevant	almost no	very little	quite efficient	reasonable	efficiently
understanding of relevant topics	almost no	very little	leading or cooperative	reasonable	practically all points
presentation	almost no	very little	to some extent	some	practically all points
addressed	almost no	very little	some correct	some	all relevant points
options expressed	almost no	very little	some correct	some	main points
correct own contribution of topics	almost no	very little	some correct	some	some main points
relevant topics	almost no	very little	some correct	some	to important topics
practically all	almost no	very little	some correct	some	to most topics
practically all points	almost no	very little	some correct	some	many
practically all	almost no	very little	some correct	some	practically all
improvement	almost no	very little	some correct	some	+ improvement
very good	almost no	very little	some correct	some	new crucial points

DISCUSSION WITH REPORTER

0 ——— almost no, irrelevant  
 1 ——— some unclear points  
 2 ——— short allowing short answers, prioritized, all time used  
 3 ——— almost all  
 4 ——— all & efficiently

ANSWERS TO JURY and REVIEWER'S QUESTIONS

0 ——— concise and correct or no questions asked  
 1 ——— some incorrect, inconclusive or too long  
 2 ——— some incorrect, inconclusive or too long  
 3 ——— some incorrect, inconclusive or too long  
 4 ——— some incorrect, inconclusive or too long

OPONENT  
 Start from 1 and add/subtract  
 $1 + 0.5 + 0.5 + 1.5 = 3$

REVIEW OF REPORT

NOTES:

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

REVIEW OF OPPOSITION

0 ——— speech summary  
 1 ——— almost no  
 2 ——— too short/long, too short/long  
 3 ——— poor  
 4 ——— almost no  
 5 ——— almost no  
 6 ——— almost no

ANSWERS TO JURY

0 ——— concise and correct or no questions asked  
 1 ——— some incorrect, inconclusive or too long  
 2 ——— some incorrect, inconclusive or too long  
 3 ——— some incorrect, inconclusive or too long  
 4 ——— some incorrect, inconclusive or too long

REVIEWER  
 Start from 1 and add/subtract  
 $1 + 2 + 2.5 + 2.5 = 8$

NOTES:

QUESTIONS ASKED

0 ——— too few, mostly irrelevant  
 1 ——— clear things out  
 2 ——— most time used, many unclear points  
 3 ——— resolved, aimed at both rep. and opp.  
 4 ——— +short, apt and clear, well prioritized  
 5 ——— time managed efficiently

**SCORESHEET**

REPORTER  
 1 + 3/5 + 2 1/2 = [ ] - [ ] = [ ]  
 Start from 1 and add/subtract

stage: 1  
 reporter: Mungury

fight (round no.): 2  
 opponent: Azabayan

room: F  
 reviewer: Poland

problem no.: 76

Jury's name: Kung-Nuan Hsu

signature: Jerry Juan Hsu

REPORT

REPORT	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment
0	almost no	almost no	top few	no/almost no	others' data, incorrectly cited	misunderstood
1	some	some	fair	some	review of sources, cited	partly
2	fair	some	fair	not well fitting	some own input	average
3	good	good	well performed, sufficient number	deviations	some interesting results	interesting
4	detailed	quite detailed	+ results explained	+ qualitatively analysed	devises	points cleared
5	demonstrative	errors analysed	+ reproducible, convincing analysis	explained, conclusive	considerable experimental	interesting points
6	deep and comprehensive	detailed, complex, completely testable	convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	discussed
	shows physical insight					brought in new physics

NOTES:

QUESTIONS ASKED	time used	understanding of relevant topics	relevant topics addressed	correct own options expressed	priority
0	almost no	almost nothing	no or irrelevant	almost no	0
1	very little	some main points	few	some	1
2	not all	main points	some	to important topics	2
3	almost all	all relevant points	many	to most topics	3
4	all & efficiently	practically all points	practically all	+ improvement suggestions	4
					new crucial point(s)

NOTES:

OPPONENT  
 1 + 3/4 + 1 1/2 + 2 1/2 = [ ] - [ ] = [ ]  
 Start from 1 and add/subtract

DISCUSSION WITH REPORTER	scientific contribution of topics	relevance of topics presented	own opinions	efficiency	priority
0	almost no	irrelevant	very little	almost no	0
1	little	some	to some extent	some	1
2	partial	average	some correct	leading or cooperative	2
3	good	many	many correct	quite efficient	3
4		almost all	+ improvement suggestions	very efficient	4
					reasonable

ANSWERS TO JURY and REVIEWER'S QUESTIONS  
 0 --- concise and correct or no questions asked  
 1 --- some unclear points  
 2 --- short allowing short answers, prioritized, all time used  
 3 --- resolved, aimed at resolving  
 4 --- all & efficiently

REVIEWER

1 + 2 + 25 + 25 = [ ] - [ ] = [ ]  
 Start from 1 and add/subtract

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

NOTES:

ANSWERS TO JURY QUESTIONS  
 0 --- concise and correct or no questions asked  
 1 --- clear things out  
 2 --- most time used, many unclear points resolved, aimed at both rep. and opp.  
 3 --- +short, apt and clear, well prioritized  
 4 --- time managed efficiently

REVIEW OF OPPOSITION

REVIEW OF REPORT

**SCORESHEET**

stage: 1  
 fight (round no.): 2  
 room: F  
 problem no.: Poland  
 reporter: Hungary  
 opponent: Azerbaijan  
 reviewer: Poland  
 Juror's name: A. Mamolika  
 signature:

REPORTER  
 Start from 1 and add/subtract  
 $1 + 4 + 3 - 0.5 = 8$

REPORT

phenomenon	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment
0 almost no explanation	0 almost no theory/model	0 some experiments	0 no/almost no theory and experiment	0 review of sources, cited	0 misunderstood
1 fair	1 fair	1 well performed, fair	1 not well fitting	1 some interesting results	1 average
2 some	2 some	2 quite detailed, correct	2 explained, deviations	2 some own input	2 interesting
3 good	3 good	3 sufficient number of errors analysed	3 well fitting, deviations	2 some interesting results	2 points cleared
4 detailed	4 quite detailed, correct	4 + results explained	4 + theory limits explained, conclusive	2 points cleared	2 points cleared
5 demonstrative	5 detailed, complex, + reproducible, errors analysed	5 convincing analysis	5 well fitting, deviations	3 some aspects above average	3 interesting points discussed
6 deep and comprehensive, shows physical insight	6 completely testable, detailed, complex, + reproducible, errors analysed	6 explains, conclusive	6 and theoretical	4 greater extent than expected	4 brought in new physics

DISCUSSION WITH OPPONENT

efficiency	relevant arguments/responses	scientific contribution	relevant own opinions	efficiency	prioritisation
0 almost no, chaotic	0 too few	0 almost no	0 almost no	0 almost no	0 no
1 avoided some questions	1 some	1 only technical	1 very little	1 to some extent	1 almost no
2 cooperated well	2 many	2 some scientific	2 some	2 leading or cooperative	2 some
3 answered directly	3 + data/theory	3 convincingly supported	3 many correct	3 quite efficient	3 reasonable
4 to most questions	4 proved deep understanding	4 brought in new physics	4 many	4 almost all suggestions	4 very good

ANSWERS TO JURY

phenomenon	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment
0 almost no explanation	0 almost no theory/model	0 some experiments	0 no/almost no theory and experiment	0 review of sources, cited	0 misunderstood
1 fair	1 fair	1 well performed, fair	1 not well fitting	1 some interesting results	1 average
2 some	2 some	2 quite detailed, correct	2 explained, deviations	2 some own input	2 interesting
3 good	3 good	3 sufficient number of errors analysed	3 well fitting, deviations	2 some interesting results	2 points cleared
4 detailed	4 quite detailed, correct	4 + results explained	4 + theory limits explained, conclusive	2 points cleared	2 points cleared
5 demonstrative	5 detailed, complex, + reproducible, errors analysed	5 convincing analysis	5 well fitting, deviations	3 some aspects above average	3 interesting points discussed
6 deep and comprehensive, shows physical insight	6 completely testable, detailed, complex, + reproducible, errors analysed	6 explains, conclusive	6 and theoretical	4 greater extent than expected	4 brought in new physics

ANSWERS TO JURY and REVIEWER'S QUESTIONS

0 concise and correct or no questions asked	0 almost no	0 almost no	0 almost no	0 almost no	0 no
1 some unclear points	1 very little	1 some main points	1 few	1 some	1 almost no
2 short allowing short answers, prioritized, all time used	2 not all	2 main points	2 some	2 to important topics	2 some
3 almost all	3 all & efficiently	3 practically all points	3 practically all	3 to most topics	3 reasonable
4 all & efficiently	4 practically all points	4 practically all points	4 practically all	4 to most topics	4 very good

QUESTIONS ASKED

0 almost no, irrelevant	0 almost no	0 almost nothing	0 no or irrelevant	0 almost no	0 no
1 some relevant, aimed at resolving	1 very little	1 some main points	1 few	1 some	1 almost no
2 short allowing short answers, prioritized, all time used	2 not all	2 main points	2 some	2 to important topics	2 some
3 almost all	3 all & efficiently	3 practically all points	3 practically all	3 to most topics	3 reasonable
4 all & efficiently	4 practically all points	4 practically all points	4 practically all	4 to most topics	4 very good

QUESTIONS ASKED

OPPOSITION (SPEECH)

0 almost no, irrelevant	0 almost no	0 almost nothing	0 no or irrelevant	0 almost no	0 no
1 some relevant, aimed at resolving	1 very little	1 some main points	1 few	1 some	1 almost no
2 short allowing short answers, prioritized, all time used	2 not all	2 main points	2 some	2 to important topics	2 some
3 almost all	3 all & efficiently	3 practically all points	3 practically all	3 to most topics	3 reasonable
4 all & efficiently	4 practically all points	4 practically all points	4 practically all	4 to most topics	4 very good

QUESTIONS ASKED

DISCUSSION WITH REPORTER

efficiency	relevant own opinions	scientific contribution of topics presented	relevant own opinions	efficiency	prioritisation
0 almost no, chaotic	0 almost no	0 almost no	0 almost no	0 almost no	0 no
1 avoided some questions	1 very little	1 irrelevant	1 some	1 to some extent	1 almost no
2 cooperated well	2 many	2 some scientific	2 some	2 leading or cooperative	2 some
3 answered directly	3 + data/theory	3 convincingly supported	3 many correct	3 quite efficient	3 reasonable
4 to most questions	4 proved deep understanding	4 brought in new physics	4 many	4 almost all suggestions	4 very good

ANSWERS TO JURY and REVIEWER'S QUESTIONS

0 concise and correct or no questions asked	0 almost no	0 almost no	0 almost no	0 almost no	0 no
1 some unclear points	1 very little	1 some main points	1 few	1 some	1 almost no
2 short allowing short answers, prioritized, all time used	2 not all	2 main points	2 some	2 to important topics	2 some
3 almost all	3 all & efficiently	3 practically all points	3 practically all	3 to most topics	3 reasonable
4 all & efficiently	4 practically all points	4 practically all points	4 practically all	4 to most topics	4 very good

QUESTIONS ASKED

REVIEWER

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

REPORT

phenomenon	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment
0 almost no explanation	0 almost no theory/model	0 some experiments	0 no/almost no theory and experiment	0 review of sources, cited	0 misunderstood
1 fair	1 fair	1 well performed, fair	1 not well fitting	1 some interesting results	1 average
2 some	2 some	2 quite detailed, correct	2 explained, deviations	2 some own input	2 interesting
3 good	3 good	3 sufficient number of errors analysed	3 well fitting, deviations	2 some interesting results	2 points cleared
4 detailed	4 quite detailed, correct	4 + results explained	4 + theory limits explained, conclusive	2 points cleared	2 points cleared
5 demonstrative	5 detailed, complex, + reproducible, errors analysed	5 convincing analysis	5 well fitting, deviations	3 some aspects above average	3 interesting points discussed
6 deep and comprehensive, shows physical insight	6 completely testable, detailed, complex, + reproducible, errors analysed	6 explains, conclusive	6 and theoretical	4 greater extent than expected	4 brought in new physics

DISCUSSION WITH REPORTER

efficiency	relevant own opinions	scientific contribution of topics presented	relevant own opinions	efficiency	prioritisation
0 almost no, chaotic	0 almost no	0 almost no	0 almost no	0 almost no	0 no
1 avoided some questions	1 very little	1 irrelevant	1 some	1 to some extent	1 almost no
2 cooperated well	2 many	2 some scientific	2 some	2 leading or cooperative	2 some
3 answered directly	3 + data/theory	3 convincingly supported	3 many correct	3 quite efficient	3 reasonable
4 to most questions	4 proved deep understanding	4 brought in new physics	4 many	4 almost all suggestions	4 very good

ANSWERS TO JURY and REVIEWER'S QUESTIONS

0 concise and correct or no questions asked	0 almost no	0 almost no	0 almost no	0 almost no	0 no
1 some unclear points	1 very little	1 some main points	1 few	1 some	1 almost no
2 short allowing short answers, prioritized, all time used	2 not all	2 main points	2 some	2 to important topics	2 some
3 almost all	3 all & efficiently	3 practically all points	3 practically all	3 to most topics	3 reasonable
4 all & efficiently	4 practically all points	4 practically all points	4 practically all	4 to most topics	4 very good

QUESTIONS ASKED

REVIEWER

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

NOTES:

QUESTIONS ASKED

0	too few, mostly irrelevant
1	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

0	poor	almost no	discussion analysis	report summary & understanding
1	partial	too short/long	too few	too few
2	good	relevant parts	many	many
3	detailed, complex, accurate,	relevant parts	+ improvement	accurate, conclusive,

REVIEW OF OPPOSITION

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

ANSWERS TO JURY

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

# SCORESHEET

stage: 2 Hungary  
 reporter: HON SUBITS  
 opponent: AZERBAIJAN  
 fight (round no.): 1  
 room: F  
 problem no.:  
 reviewer: ROYALD AUGUSTYNOWICZ  
 juror's name: RYU H. TAN  
 signature: *[Signature]*

REPORT	phenomenon	theory/model	experiments	relevant	comparison between	own contribution	task fulfillment
0	almost no explanation	almost no theory/model	almost no experiments	almost no relevant	no/almost no comparison between	others' data, incorrectly cited	misunderstood
1	some	some	some	some	not well fitting	review of sources, cited	partly
2	fair	fair	well performed,	fair	deviations	some own input	average
3	good	good	sufficient number,	good	qualitatively analysed	some interesting results	interesting
4	detailed	quite detailed,	+ results explained	+ results explained	+ theory limits	points cleared	points cleared
5	demonstrative	correct	errors analysed	errors analysed	exp. and, coherent	discussed	discussed
6	shows physical insight	completely testable,	well fitting, deviations	convincing analysis	analysed, conclusive	considerable experimental	greater extent

DISCUSSION WITH OPPONENT	scientific contribution	relevant	own opinions	efficiency	priority
0	almost no scientific contribution	almost no relevant	almost no own opinions	almost no efficiency	almost no priority
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 points	almost all suggestions	very efficient	very good	very good

REVIEW OF REPORT	report summary & analysis	discussion	own opinions	pros & cons	priority
0	almost no report summary & analysis	almost no discussion	almost no own opinions	almost no pros & cons	almost no priority
1	poor	too short/long	irrelevant	irrelevant	no
2	good	mostly adequate	many	mostly adequate	some
3	complex, detailed,	accurate,	+ improvement	fully	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

ANSWERS TO JURY and DISCUSSION WITH REPORTER

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

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 --- almost all relevant points  
 4 --- all & efficiently

QUESTIONS ASKED

0 --- too few, mostly irrelevant  
 1 --- clear things out  
 2 --- resolved, aimed at both rep. and opp.  
 3 --- +short, apt and clear, well prioritized  
 time managed efficiently

REVIEWER

Start from 1 and add/subtract

1 + 2 + 2 = 5

OPONENT

Start from 1 and add/subtract

1 + 0.75 + 1.25 = 3

REPORTER

Start from 1 and add/subtract

1 + 4 + 2.25 = 7.25

NOTES:

2

NOTES:

2

Round: 2 Room: F Fight Assistants: CLARENCE CHAI HUIHONG, TAN YEE PING

WIKONA OKDEN WJ SYRER I (PAPER)



Juror	Team	Stage 1		Stage 2		Stage 3		Stage 4						
		Hungary Rep	Azerbaijan Opp	Poland Rev	Azerbaijan Rep	Poland Opp	Hungary Rev	Poland Rep	Hungary Opp	Azerbaijan Rev	Rep	Opp	Rev	
FARIDA TAHIR		8	5	6	2	7	8	8	8	8				
ALEXANDER SHEVCHENKOV		7	3	8	3	5	3	6	6	7				
ALIASKANDR MAMONIKHA		8	3	7	3	7	4	9	7	7				
RYAN HSIAO-TSU LIU		7	4	8	3	7	8	8	8	8				
SHUNG-YUAN HSU		7	5	8	2	8	8	7	7	5				
	Acting Team Member													
	Rejected Problems	5												
	Accepted Problem	16			9				13					

Signature Fight Assistant: ..... Double-checked with Scoring Guidelines by second Fight Assistant (signature): .....