	1	i l waspan					
Scoring Guideli		n: Problem no.: 1					
Scoring Guiacin	nes Juror: <u>LVAN AN TSIVA</u>	Signature:					
A report should include:							
• a presentation of the appropriate conception application of appropriate mathematics • 1	ots, theories and principles of the problem • an eleasonable experimental technique to gather and a experimental findings to draw suitable conclusion adable manner	record data (or demonstrate the phenomena if					
An opposition should show that: • the opponent challenged the reporter's u appropriate mathematics presented • the copponent appreciated and highlighted the statements.	nderstanding of the presented concepts, theories apponent critiqued the experimental technique use	and <i>principles</i> • the opponent understood the ed and questioned the <i>validity</i> of the <i>data</i> • the					
A review should show that:							
important aspects (especially the controver	ctive summary of the performances the reporter isial ones) • the reviewer's personal opinion was in con-trivial and demonstrated, where possible, the red by the reporter and the opponent	n evidence (not just superficial observations) •					
 The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each se Don't punish missing 'answers' when it 	add to or deduct from the initial 5 points. ction and write it in the corresponding box. no questions were posed or not finding shortcomes.						
Rep.: <u>LN PONT-SIA</u> 5	Opp.: NETHER LAND 5	Rev.: 1R41/ 5					
Physics ±3	Physics ±3	Physics ±3					
Correct and relevant physics	Correct and relevant physics	Correct and relevant physics					
☐ Scientific approach	Scientific approach	Scientific approach					
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions					
Accurate answers	☐ Accurate answers	Accurate answers					
Presentation ± 1	Presentation ±1	Presentation ±1					
Clear and understandable	☐ Clear and understandable	Lh Clear and understandable					
Appropriate manner	☐ Appropriate manner	Appropriate manner					
Overall impression	Overall impression	☐ Overall impression					
Reporter ±1	Opponent ±1	Reviewer ±1					
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion					
☑ Structure	Shows the strong and weak points	Expresses own opinion about					
Explanation of formulae and symbols	of the report Finds shortcomings or errors in	topics presented or discussed Relevance of questions to both the					
Appropriate models, conformity of dimensions	the report Relevance of the questions	reporter and the opponent Draws attention to points missed					
Slides, on-site experiments, audio, video, as appropriate	Contribution to the discussion	by the reporter or the opponent					
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and					
Novelty of the report		fight assistant, so we can archive your partial grades – please					
Contribution to the discussion		do not bend					
Procedure and the second and the sec							

Final Grade: Opponent 5 Final Grade: Reviewer 5 Final Grade: Reviewer Ec on 2011-11-03

Final Grade: Reporter

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				2000									

Fight (Round no.):	Room: 	Stage: Pro	blem no.: <u>2</u>
Juror: Olga Lu	<u>Sheva</u> Signature	e: <i>OR</i>	42

• a presentation of the appropriate concepts, theories and principles of the problem • an explanation of the observed phenomena • an application of appropriate mathematics • reasonable experimental technique to gather and record data (or demonstrate the phenomena if appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • an attempt to communicate difficult or complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent challenged the reporter's understanding of the presented concepts, theories and principles • the opponent understood the appropriate mathematics presented ● the opponent critiqued the experimental technique used and questioned the validity of the data ● the opponent appreciated and highlighted the strengths and weaknesses of the report

A review should show that:

- the reviewer succeeded in giving an objective summary of the performances the reporter and opponent the reviewer appreciated the important aspects (especially the controversial ones) • the reviewer's personal opinion was in evidence (not just superficial observations) • such personal opinions were informative, non-trivial and demonstrated, where possible, the reviewer's understanding of concepts, theories, principles and appropriate mathematics used by the reporter and the opponent
- The grade for each of the three teams consists of a partial grade for *physics*, *presentation* and for their *specific role*.
- The reporter, opponent and reviewer each start with 5 points

 Select each partial grade from each sec 	add to or deduct from the initial 5 points. tion and write it in the corresponding box. o questions were posed or not finding shorted	omings if there were none to find.
Rep.: Indon 5	Opp.: Neth 5	Rev.: Ilan 5
Physics ±3	Physics ±3	Physics ±3
☐ Correct and relevant physics	☐ Correct and relevant physics	Correct and relevant physics
☐ Scientific approach	Scientific approach	☐ Scientific approach
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions
Accurate answers	☐ Accurate answers	☐ Accurate answers
Presentation ±1	Presentation ±1	Presentation ±1
Clear and understandable	☐ Clear and understandable	Clear and understandable
☐ Appropriate manner	☐ Appropriate manner	☐ Appropriate manner
☐ Overall impression	☐ Overall impression	☐ Overall impression
Reporter ±1	Opponent ±1	Reviewer ±1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
☐ Structure	☐ Shows the strong and weak points	Expresses own opinion about
Explanation of formulae and	of the report	topics presented or discussed
symbols Appropriate models, conformity	Finds shortcomings or errors in the report	Relevance of questions to both the reporter and the opponent
of dimensions	☐ Relevance of the questions	Draws attention to points missed by the reporter or the opponent
Slides, on-site experiments, audio, video, as appropriate	Contribution to the discussion	
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and
☐ Novelty of the report		fight assistant, so we do archive your partial grades — please
⊞ Contribution to the discussion		do not bend
	- Company of the Comp	

Final Grade: Opponent



	•	
Scoring Guidelii	Fight (Round no.): 2 Room Nes Juror: Eugen With	n: Problem no.: 2
application of appropriate mathematics • r	ets, theories and principles of the problem • an e easonable experimental technique to gather and e experimental findings to draw suitable conclusion dable manner	record data (or demonstrate the phenomena if
An opposition should show that: • the opponent challenged the reporter's unappropriate mathematics presented • the opponent appreciated and highlighted the st	nderstanding of the presented concepts, theories pponent critiqued the experimental technique use	and <i>principles</i> • the opponent understood the d and questioned the <i>validity</i> of the <i>data</i> • the
A review should show that:		
important aspects (especially the controvers	ctive summary of the performances the reporter sial ones) • the reviewer's personal opinion was in on-trivial and demonstrated, where possible, the red by the reporter and the opponent	evidence (not just superficial observations) •
 Select each partial grade from each se 	each start with 5 points. add to or deduct from the initial 5 points. ction and write it in the corresponding box. no questions were posed or not finding shortco	Rev.: Lau 5
Physics ±3	Physics ±3	Physics ±3 2
Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics
Scientific approach	☐ Scientific approach	☐ Scientific approach
✓ Validity of conclusions ☐ Accurate answers	☐ Validity of conclusions ☐ Accurate answers	☐ Validity of conclusions ☐ Accurate answers
Presentation ±1	Presentation ±1	Presentation ±1
Clear and understandable	☐ Clear and understandable	☐ Clear and understandable
Appropriate manner	Appropriate manner	☐ Appropriate manner
Overall impression	Overall impression	Overall impression
leporter ±1	Opponent ±1	Reviewer ±1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
] Structure	☐ Shows the strong and weak points	Expresses own opinion about
Explanation of formulae and symbols	of the report Finds shortcomings or errors in	topics presented or discussed Relevance of questions to both the
Appropriate models, conformity of dimensions	the report Relevance of the questions	reporter and the opponent Draws attention to points missed

This sheet will be collected by the References, proper citations of ideas and input of others fight assistant, so we can scan it and archive your partial grades - please ☐ Novelty of the report ☐ Contribution to the discussion

☐ Relevance of the questions

☐ Contribution to the discussion

Slides, on-site experiments, audio, video, as appropriate

Final Grade: Reporter

do not bend

Final Grade: Opponent

Final Grade: Reviewer

Revised after IOC feedback and approved by EC on 2011-11-03

Draws attention to points missed by the reporter or the opponent



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	CO	8	H	#	题	\mathbf{y}					8	2		J

Fight (Round no.): 2 Room:	Stage: 1 Problem no.:	Ź
Juror: Daniela Ivanova	Signature:	

• a presentation of the appropriate concepts, theories and principles of the problem • an explanation of the observed phenomena • an application of appropriate mathematics • reasonable experimental technique to gather and record data (or demonstrate the phenomena if appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • an attempt to communicate difficult or complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent *challenged* the *reporter's understanding* of the presented *concepts, theories* and *principles* • the opponent understood the *appropriate mathematics* presented • the opponent *critiqued* the *experimental technique* used and questioned the *validity* of the *data* • the opponent appreciated and highlighted the *strengths and weaknesses* of the report

A review should show that:

Final Grade: Reporter

- the reviewer succeeded in giving an *objective summary* of the performances the *reporter* and *opponent* the reviewer appreciated the *important aspects* (especially the *controversial* ones) the reviewer's *personal opinion* was in evidence (*not* just *superficial observations*) such personal opinions were *informative*, *non-trivial* and demonstrated, where possible, the reviewer's *understanding* of *concepts*, *theories*, *principles* and *appropriate mathematics* used by the reporter and the opponent
- The grade for each of the three teams consists of a partial grade for physics, presentation and for their specific role.
- The reporter, opponent and reviewer each start with 5 points.
- Consider the following suggestions to add to or deduct from the initial 5 points.

 Select each partial grade from each section and write it in the corresponding box. Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find. 									
Rep.: Humanan Wangan 5	Opp.: Andre Sarnatal 5	Rev.: Schelle Auizage 5							
Physics ±3	Physics ±3	Physics ±3							
☐ Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics							
☐ Scientific approach	☐ Scientific approach	☐ Scientific approach							
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions							
Accurate answers	☐ Accurate answers	☐ Accurate answers							
Presentation ±1	Presentation ±1	Presentation ±1							
Clear and understandable	☐ Clear and understandable	☐ Clear and understandable							
Appropriate manner	☐ Appropriate manner	☐ Appropriate manner							
☐ Overall impression	☐ Overall impression	☐ Overall impression							
Reporter ±1	Opponent ±1	Reviewer ±1							
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion							
☐ Structure	☐ Shows the strong and weak points	☐ Expresses own opinion about							
☐ Explanation of formulae and	of the report	topics presented or discussed							
symbols Appropriate models, conformity	Finds shortcomings or errors in the report	Relevance of questions to both the reporter and the opponent							
of dimensions	☐ Relevance of the questions	☐ Draws attention to points missed							
Slides, on-site experiments, audio, video, as appropriate	Contribution to the discussion	by the reporter or the opponent							
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and							
☐ Novelty of the report		archive your partial Blades							
Contribution to the discussion		do not bend							
	1.	District Annual Control of Contro							

Final Grade: Opponent

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	-					***	4	Aller S	200	All Park	A COURS		60 ;		25	ALCOHOL: N	CONTRACT OF THE PARTY OF THE PA

☑ Correct and relevant physics

☐ Scientific approach

Accurate answers

Presentation ±1

☐ Validity of conclusions

☐ Clear and understandable

☐ Slides, on-site experiments, audio,

References, proper citations of

ideas and input of others

☐ Novelty of the report

☐ Appropriate manner

☐ Overall impression

Reporter ±1

☐ Structure

Physics ±3

	Fight (Round no):	n: Stage: Problem no.:
Scoring Guideli		KAO Signature: Wilan-Chung Ka
	Jaior. 1 SAIV O 10144	_ signature. Nation of the
A report should include:		
 a presentation of the appropriate concept application of appropriate mathematics 	ots, theories and principles of the problem • an eleasonable experimental technique to gather and i	explanation of the observed phenomena • an
appropriate) • linking of theoretical and complex ideas in an effective and understan	experimental findings to draw suitable conclusio	ins • an attempt to communicate difficult or
An opposition should show that		
• the opponent <i>challenged</i> the <i>reporter's</i> u	nderstanding of the presented concepts, theories	and <i>principles</i> • the opponent understood the
opponent appreciated and highlighted the s	pponent critiqued the experimental technique use trengths and weaknesses of the report	d and questioned the <i>validity</i> of the <i>data</i> • the
A review should show that:		
• the reviewer succeeded in giving an <i>obje</i>	ctive summary of the performances the reporter	and opponent • the reviewer appreciated the
such personal opinions were <i>informative</i> , <i>n</i> <i>principles</i> and <i>appropriate</i> mathematics use	sial ones) • the reviewer's personal opinion was in on-trivial and demonstrated, where possible, the read by the reporter and the opponent	n evidence (not just superficial observations) • eviewer's understanding of concepts, theories,
The grade for each of the three teams	consists of a partial grade for <i>physics</i> , <i>presen</i>	tation and for their specific role
The <i>reporter, opponent</i> and <i>reviewer</i>	each start with 5 points.	otion and for their specific role.
	add to or deduct from the initial 5 points.	
	ction and write it in the corresponding box. no questions were posed or not finding shorte	omings if there were none to find
14/		weed \$500
Rep.: H. Wicak sova 5	Opp.: A. Savnatrky 5	Rev.: 15
hysics +3		
hysics ±3 Correct and relevant physics	Physics ±3	Physics ±3
Scientific approach	☐ Correct and relevant physics ☐ Scientific approach	☐ Correct and relevant physics
Validity of conclusions	☐ Validity of conclusions	☐ Scientific approach
Accurate answers	Accurate answers	☐ Validity of conclusions ☐ Accurate answers
	- Additional and the second	Accurate answers
resentation ±1	Presentation ±1	Presentation ±1
Clear and understandable	☐ Clear and understandable	☐ Clear and understandable
J Appropriate manner	Appropriate manner	☐ Appropriate manner
Overall impression	Overall impression	Overall impression
eporter ±1	Opponent ±1	Reviewer ±1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
Structure	Shows the strong and weak points of the report	Expresses own opinion about
Explanation of formulae and symbols	Finds shortcomings or errors in the report	topics presented or discussed Relevance of questions to both the
Appropriate models, conformity of dimensions	Relevance of the questions	reporter and the opponent Draws attention to points missed
Slides, on-site experiments, audio, video, as appropriate	Contribution to the discussion	by the reporter or the opponent
References, proper citations of ideas and input of others		This sheet will be collected by the

Final Grade: Reporter

☐ Contribution to the discussion

Final Grade: Opponent

Final Grade: Reviewer

do not bend

Revised after IOC feedback and approved by EC on 2011-11-03

fight assistant, so we can scan it and

archive your partial grades - piease

	Fight (Round no.):	m: H Stage: Problem no.:					
Scoring Guidelin	1es Juror: Suringer	/ m					
application of appropriate mathematics • re	es, theories and principles of the problem • an eleasonable experimental technique to gather and experimental findings to draw suitable conclusions and the manner	record data (or demonstrate the phenomena if					
An opposition should show that: • the opponent challenged the reporter's un	derstanding of the presented concepts, theories sponent critiqued the experimental technique use	and <i>principles</i> • the opponent understood the ed and questioned the <i>validity</i> of the <i>data</i> • the					
important aspects (especially the controvers	tive summary of the performances the reporter ial ones) • the reviewer's personal opinion was in-trivial and demonstrated, where possible, the relative the reporter and the opponent	n evidence (<i>not</i> just <i>superficial observations</i>) •					
 The reporter, opponent and reviewer expensions Consider the following suggestions to a select each partial grade from each second 	tion and write it in the corresponding box. o questions were posed or not finding shorts. Opp.://a.welsh.	omings if there were none to find. 7 raw Rev.: (Sohe: 6)					
Physics ±3	Physics ±3	Physics ±3					
Correct and relevant physics Scientific approach	☐ Correct and relevant physics☐ Scientific approach	☐ Correct and relevant physics ☐ Scientific approach					
☐ Validity of conclusions ☐ Accurate answers	☐ Validity of conclusions ☐ Accurate answers	□ Validity of conclusions□ Accurate answers					
Presentation ±1	Presentation ±1	Presentation ±1					
☐ Clear and understandable☐ Appropriate manner☐ Overall impression	☐ Clear and understandable ☐ Appropriate manner ☐ Overall impression	☐ Clear and understandable ☐ Appropriate manner ☐ Overall impression					
Reporter ±1	Opponent ±1	Reviewer ±1					
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion					
Structure	Shows the strong and weak points of the report	Expresses own opinion about topics presented or discussed					
Explanation of formulae and symbols	Finds shortcomings or errors in the report	Relevance of questions to both the					
 Appropriate models, conformity of dimensions 	Relevance of the questions	reporter and the opponent Draws attention to points missed					
Slides, on-site experiments, audio, video, as appropriate	☐ Contribution to the discussion	by the reporter or the opponent					
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and					
☐ Novelty of the report		archive your partial glades					
☐ Contribution to the discussion		do not bend					

Final Grade: Opponent

Final Grade: Reporter

	2	Fight (Round no.):	U Room	n: H Stage: II Problem	no.: d
Scoring Guid	delines	Juror: JUAN A	NISIPAL		
A report should include:					
 a presentation of the appropriate mather 	<i>matics</i> • reasonable fical and <i>experimen</i>	experimental technique al findings to draw su	e to <i>gather</i> and <i>i</i>	explanation of the observed phenomen record data (or demonstrate the pheno ons • an attempt to communicate diff	omena if
An opposition should show the opponent challenged the reappropriate mathematics present opponent appreciated and highlight	porter's understand ed • the opponent c	itiqued the experiment	al technique use	and <i>principles</i> • the opponent underst d and questioned the <i>validity</i> of the <i>da</i>	cood the
A review should show that		-			
important aspects (especially the	<i>controversial</i> ones) « <i>mative, non-trivial</i> a	 the reviewer's persone and demonstrated, where 	al opinion was in e possible, the re	and opponent • the reviewer apprecian evidence (not just superficial observance) eviewer's understanding of concepts, the	itions) •
 The reporter, opponent and second consider the following sugge Select each partial grade from 	<i>reviewer</i> each <i>star</i> s <i>tions</i> to <i>add</i> to or n each section and	t with 5 points. deduct from the inition write it in the corresp	al 5 points . ponding box.	tation and for their specific role. Domings if there were none to find.	
Rep.: NETHERLAND	5 Opp	:: IRAN	5	Rev.: INPONESTA	5
Physics ±3	-2 Phys	ics ±3	+ 05	Physics ±3	0
Correct and relevant phys	- I	prrect and relevant	physics	Correct and relevant physic	ics
Scientific approach	1 ."	ientific approach		Scientific approach	
✓ Validity of conclusions☐ Accurate answers		lidity of conclusions curate answers	S	☐ Validity of conclusions☐ Accurate answers	
Presentation ±1	O Prese	entation ±1	0	Presentation ±1	0
Clear and understandable	□ Cle	ear and understand	able	Clear and understandable	www.mannewannewand
☐ Appropriate manner☐ Overall impression	1	propriate manner		Appropriate manner	
		erall impression	[(0)	Overall impression	
Reporter ±1		nent ±1	478	Reviewer ±1	O _p
← U Quality of experimental technique(s)	₽ Re	sponse to the repor ution	ter's	Provides a thorough review report and discussion	v of
Structure	l of	ows the strong and the report	weak points	Expresses own opinion abo topics presented or discuss	out sed
Explanation of formulae ar symbols	Fin	ds shortcomings or report	errors in	Relevance of questions to lareporter and the opponent	both the
☐ Appropriate models, confo	rmity Rel	evance of the ques	tions	☐ Draws attention to points r	missed
Slides, on-site experiments video, as appropriate	, audio, D Co	ntribution to the dis	scussion	by the reporter or the oppo	onent
References, proper citation ideas and input of others	ns of			This sheet will be collected b	
Novelty of the report			·	archive your partial glades	please
Contribution to the discuss	ion			do not bend	
Final Grade: Reporter	Final (Grade: Opponent	Revised a	Final Grade: Reviewer after IOC feedback and approved by EC on 20	011-11-03

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Fight (Round no.): 2 Room:	:_ <u>-</u>	tage: <u>2</u>	_ Problem no.: _	14
Juror: Olga luisheva	Signature:	all		

• a presentation of the appropriate concepts, theories and principles of the problem • an explanation of the observed phenomena • an application of appropriate mathematics • reasonable experimental technique to gather and record data (or demonstrate the phenomena if appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • an attempt to communicate difficult or complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent challenged the reporter's understanding of the presented concepts, theories and principles • the opponent understood the appropriate mathematics presented • the opponent critiqued the experimental technique used and questioned the validity of the data • the opponent appreciated and highlighted the strengths and weaknesses of the report

A review should show that:

- the reviewer succeeded in giving an objective summary of the performances the reporter and opponent the reviewer appreciated the important aspects (especially the controversial ones) • the reviewer's personal opinion was in evidence (not just superficial observations) • such personal opinions were informative, non-trivial and demonstrated, where possible, the reviewer's understanding of concepts, theories, principles and appropriate mathematics used by the reporter and the opponent
- The grade for each of the three teams consists of a partial grade for *physics*, *presentation* and for their *specific role*.
- The reporter, opponent and reviewer each start with 5 points.

 Select each partial grade from each sec 	add to or deduct from the initial 5 points. Ition and write it in the corresponding box. O questions were posed or not finding shortco	omings if there were none to find.
Rep.: Neth. 5	Opp.: IRau 5	Rev.: Indon 5
Physics ±3 – 2	Physics ±3	Physics ±3
Correct and relevant physics	Correct and relevant physics	☐ Correct and relevant physics
Scientific approach	Scientific approach	☐ Scientific approach
☐ Validity of conclusions	Validity of conclusions	☐ Validity of conclusions
J ☐ Accurate answers	☐ Accurate answers	☐ Accurate answers
Presentation ±1	Presentation ±1	Presentation ±1
Clear and understandable	Clear and understandable	☐ Clear and understandable
☐ Appropriate manner	☐ Appropriate manner	☐ Appropriate manner
Overall impression	☐ Overall impression	Overall impression
Reporter ±1	Opponent ±1	Reviewer ±1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
☐ Structure	Shows the strong and weak points	Expresses own opinion about
Explanation of formulae and	of the report	topics presented or discussed
symbols Appropriate models, conformity	Finds shortcomings or errors in the report	Relevance of questions to both the reporter and the opponent
of dimensions	Relevance of the questions	Draws attention to points missed by the reporter or the opponent
Slides, on-site experiments, audio, video, as appropriate	Contribution to the discussion	by the reporter or the opponent
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and
Novelty of the report		fight assistant, so we con- archive your partial grades – please
☐ Contribution to the discussion		do not bend
		prosonania

Final Grade: Opponent

Revised after IOC feedback and approved by EC on 2011-11-03

		Fight (Round no.):	Rooi	m: Stage	e: Problem no.:	TO BELLEVILLE
Scoring	Guidelines	Juror: Elevel	Voit	Signature:	(2- 6X)	
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• a presentation of the appropriate concepts, theories and principles of the problem • an explanation of the observed phenomena • an application of appropriate mathematics • reasonable experimental technique to gather and record data (or demonstrate the phenomena if appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • an attempt to communicate difficult or complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent *challenged* the *reporter's understanding* of the presented *concepts, theories* and *principles* • the opponent understood the *appropriate mathematics* presented • the opponent *critiqued* the *experimental technique* used and questioned the *validity* of the *data* • the opponent appreciated and highlighted the *strengths and weaknesses* of the report

A review should show that:

Final Grade: Reporter

- the reviewer succeeded in giving an *objective summary* of the performances the *reporter* and *opponent* the reviewer appreciated the *important aspects* (especially the *controversial* ones) the reviewer's *personal opinion* was in evidence (*not* just *superficial observations*) such personal opinions were *informative*, *non-trivial* and demonstrated, where possible, the reviewer's *understanding* of *concepts*, *theories*, *principles* and *appropriate mathematics* used by the reporter and the opponent
- The grade for each of the three teams consists of a partial grade for physics, presentation and for their specific role.

 Select each partial grade from each sec 	each start with 5 points. add to or deduct from the initial 5 points. tion and write it in the corresponding box. o questions were posed or not finding shortco	omings if there were none to find.
Rep.: Natholands 5	Opp.: Irau 5	Rev.: Indouera 5
Physics ±3	Physics ±3	Physics ±3
☐ Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics
☐ Scientific approach	☐ Scientific approach	☐ Scientific approach
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions
☐ Accurate answers	☐ Accurate answers	☐ Accurate answers
Presentation ±1	Presentation ±1	Presentation ±1
☐ Clear and understandable	Clear and understandable	☐ Clear and understandable
☐ Appropriate manner	☐ Appropriate manner	☐ Appropriate manner
Overall impression	Overall impression	☐ Overall impression
Reporter ±1	Opponent ±1	Reviewer ±1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
☐ Structure	☐ Shows the strong and weak points	Expresses own opinion about
☐ Explanation of formulae and	of the report	Expresses own opinion about topics presented or discussed
symbols Appropriate models, conformity	Finds shortcomings or errors in the report	Relevance of questions to both the reporter and the opponent
of dimensions	☐ Relevance of the questions	Draws attention to points missed by the reporter or the opponent
Slides, on-site experiments, audio, video, as appropriate	☐ Contribution to the discussion	by the reporter or the opponent
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and
☐ Novelty of the report		fight assistant, so we can be a please archive your partial grades – please
Contribution to the discussion		do not bend
3		

Final Grade: Opponent

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					Carrier Services									

Fight (Round no.): 🚣 Room:	Stage: 2 Problem no.: 14
Juror: Daniela Ivanova	Signature:

Revised after IOC feedback and approved by EC on 2011-11-03

A report should include:

• a presentation of the appropriate concepts, theories and principles of the problem • an explanation of the observed phenomena • an application of appropriate mathematics • reasonable experimental technique to gather and record data (or demonstrate the phenomena if appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • an attempt to communicate difficult or complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent challenged the reporter's understanding of the presented concepts, theories and principles • the opponent understood the appropriate mathematics presented • the opponent critiqued the experimental technique used and questioned the validity of the data • the opponent appreciated and highlighted the strengths and weaknesses of the report

A review should show that:

- the reviewer succeeded in giving an objective summary of the performances the reporter and opponent the reviewer appreciated the important aspects (especially the controversial ones) • the reviewer's personal opinion was in evidence (not just superficial observations) • such personal opinions were informative, non-trivial and demonstrated, where possible, the reviewer's understanding of concepts, theories, principles and appropriate mathematics used by the reporter and the opponent
- The grade for each of the three teams consists of a partial grade for physics, presentation and for their specific role.

	each start with 5 points. add to or deduct from the initial 5 points. Ition and write it in the corresponding box.	
 Don't punish missing 'answers' when n 	o questions were posed or not finding shortco	omings if there were none to find.
Rep.: Maarlen 5	Opp.: Ivan 5	Rev.: Roji Ambreshan 5
Physics ± 3 -2	Physics ±3	Physics ±3
☐ Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics
🖄 Scientific approach	☐ Scientific approach	☐ Scientific approach
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions
Accurate answers	☐ Accurate answers	☐ Accurate answers
Presentation ±1	Presentation ±1	Presentation ±1
🔀 Clear and understandable	💢 Clear and understandable	☐ Clear and understandable
☐ Appropriate manner	☐ Appropriate manner	☐ Appropriate manner
Overall impression	☐ Overall impression	☐ Overall impression
Reporter ±1	Opponent ±1	Reviewer ±1 +1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
☐ Structure	Shows the strong and weak points	£
☐ Explanation of formulae and	of the report	Expresses own opinion about topics presented or discussed
symbols	Finds shortcomings or errors in the report	Relevance of questions to both the reporter and the opponent
Appropriate models, conformity of dimensions	Relevance of the questions	
Slides, on-site experiments, audio, video, as appropriate	Contribution to the discussion	Draws attention to points missed by the reporter or the opponent
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and
☐ Novelty of the report		fight assistant, so we con archive your partial grades – please
☐ Contribution to the discussion		do not bend
Final Grade: Reporter	Final Grade: Opponent	Final Grade: Reviewer

Scoring Guidelines	Fight (Round no.): 2 Juror: HSIEM-CHUNG			
A report should include: • a presentation of the appropriate concepts, theories application of appropriate mathematics • reasonable eappropriate) • linking of theoretical and experiments complex ideas in an effective and understandable manner.	experimental technique to gath al findings to draw suitable co	er and record data	t <mark>a (</mark> or demonstrat	te the <i>phenomena</i> if

An opposition should show that:

• the opponent challenged the reporter's understanding of the presented concepts, theories and principles • the opponent understood the appropriate mathematics presented • the opponent critiqued the experimental technique used and questioned the validity of the data • the opponent appreciated and highlighted the strengths and weaknesses of the report

A review should show that:

• the reviewer succeeded in giving an objective summary of the performances the reporter and opponent • the reviewer appreciated the important aspects (especially the controversial ones) • the reviewer's personal opinion was in evidence (not just superficial observations) • such personal opinions were informative, non-trivial and demonstrated, where possible, the reviewer's understanding of concepts, theories, principles and appropriate mathematics used by the reporter and the opponent

 The reporter, opponent and reviewer e Consider the following suggestions to Select each partial grade from each sec 	consists of a partial grade for <i>physics, present</i> each <i>start with 5 points</i> . add to or <i>deduct</i> from the initial <i>5 points</i> . Ition and <i>write it</i> in the corresponding box. It o questions were posed or not finding shortco			
Rep.: Netherland 5	Opp.: Iran 5	Rev.: Indonesia 5		
Physics ±3	Physics ±3 +0.5	Physics ±3		
☐ Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics		
□ Scientific approach	☐ Scientific approach	☐ Scientific approach		
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions		
☐ Accurate answers	Accurate answers	Accurate answers		
Presentation ±1	Presentation ±1	Presentation ±1		
☐ Clear and understandable	☐ Clear and understandable	☐ Clear and understandable		
☐ Appropriate manner	☐ Appropriate manner	☐ Appropriate manner		
☐ Overall impression	☐ Overall impression	Overall impression		
Reporter ±1 +0.5	Opponent ±1 Fo. 7	Reviewer ±1 +		
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion		
☐ Structure	☐ Shows the strong and weak points	☐ Expresses own opinion about		
☐ Explanation of formulae and	of the report	topics presented or discussed		
symbols	Finds shortcomings or errors in the report	Relevance of questions to both the		
Appropriate models, conformity of dimensions	Relevance of the questions	reporter and the opponent Draws attention to points missed		
Slides, on-site experiments, audio, video, as appropriate	Contribution to the discussion	by the reporter or the opponent		
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and		
☐ Novelty of the report		fight assistant, so we end archive your partial grades – please		
Contribution to the discussion	100	do not bend		
grand of the second of the sec		gradelen/montational and here empressioning		

Scoring Guidelines	Fight (Round no.): Room:	Signature:	Problem no.: _	10
A report should include:				7

• a presentation of the appropriate concepts, theories and principles of the problem • an explanation of the observed phenomena • an application of appropriate mathematics • reasonable experimental technique to gather and record data (or demonstrate the phenomena if appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • an attempt to communicate difficult or complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent challenged the reporter's understanding of the presented concepts, theories and principles • the opponent understood the appropriate mathematics presented ● the opponent critiqued the experimental technique used and questioned the validity of the data ● the opponent appreciated and highlighted the strengths and weaknesses of the report

A review should show that:

• the reviewer succeeded in giving an objective summary of the performances the reporter and opponent • the reviewer appreciated the important aspects (especially the controversial ones) the reviewer's personal opinion was in evidence (not just superficial observations) such personal opinions were informative, non-trivial and demonstrated, where possible, the reviewer's understanding of concepts, theories, principles and appropriate mathematics used by the reporter and the opponent

 The reporter, opponent and reviewer e Consider the following suggestions to e Select each partial grade from each sec 	consists of a partial grade for <i>physics, presen</i> each <i>start with 5 points</i> . add to or <i>deduct</i> from the initial <i>5 points</i> . Stion and <i>write it</i> in the corresponding box. To questions were posed or not finding shorte	
Rep.: Netherlands 5	Opp.: 5	Rev.: Indonésia 5
Physics ±3	Physics ±3	Physics ±3
Correct and relevant physics	☐ Correct and relevant physics	(日) Correct and relevant physics
Scientific approach	☐ Scientific approach	☐ Scientific approach
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions
☐ Accurate answers	☐ Accurate answers	☐ Accurate answers
Presentation ±1	Presentation ±1 +0,5	Presentation ±1
☐ Clear and understandable	☐ Clear and understandable	☐ Clear and understandable
☐ Appropriate manner	Appropriate manner	☐ Appropriate manner
☐ Overall impression	Overall impression	Overall impression
Reporter ±1	Opponent ±1 40,5	Reviewer ±1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
☐ Structure ☐ Explanation of formulae and	Shows the strong and weak points of the report	Expresses own opinion about topics presented or discussed
symbols	Finds shortcomings or errors in the report	Relevance of questions to both the reporter and the opponent
Appropriate models, conformity of dimensions	☐ Relevance of the questions	
Slides, on-site experiments, audio, video, as appropriate	Contribution to the discussion	Draws attention to points missed by the reporter or the opponent
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and
Novelty of the report		fight assistant, so we or archive your partial grades – please
Contribution to the discussion		do not bend
	7	

Final Grade: Opponent

		Fight (Round no). 4 Ros	om: H Stage: 11/ Problem 6.: 1
Scoring Guideling	1es	Juror: JVAN		
		Juror: <u>3 +7//v</u>	111/1011/	Signature: // // Signature:
A report should include:			***	$-\mathcal{U}^{\chi}$
application of appropriate mathematics • re	easonable e Experimento	experimental technique of the second contract	que to <i>gather</i> an	n <i>explanation</i> of the <i>observed phenomena</i> • and direcord data (or demonstrate the phenomena if sions • an attempt to communicate difficult or
An opposition should show that: • the opponent challenged the reporter's unappropriate mathematics presented • the opponent appreciated and highlighted the st	pponent <i>cri</i>	itiqued the experime.	ntal technique u	es and <i>principles</i> • the opponent understood the used and questioned the <i>validity</i> of the <i>data</i> • the
A review should show that:				
important aspects (especially the controvers	s <i>ial</i> ones) • • <i>n-trivial</i> an	the reviewer's <i>perso</i> Id demonstrated, wh	onal opinion was ere possible, the	er and opponent • the reviewer appreciated the in evidence (not just superficial observations) • reviewer's understanding of concepts, theories,
 The grade for each of the three teams The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each sec Don't punish missing 'answers' when no 	each <i>start</i> <i>add</i> to or o ction and c	with 5 points. deduct from the ini write it in the corre	itial <i>5 points</i> . Esponding box.	
Rep.: <u>IRAN</u> 5	Орр	:INDONES	<i>IA</i> 5	Rev.: NETHER LAWRES
Physics ±3	Physi	rc +3	+1	Physics +2
Correct and relevant physics	1	rrect and relevan	t physics	Physics ±3
Scientific approach		entific approach	r physics	☐ Correct and relevant physics☐ Scientific approach
Validity of conclusions		lidity of conclusio	ns	☐ Validity of conclusions
☐ Accurate answers	*******	curate answers		☐ Accurate answers
Presentation ±1	Prese	ntation ±1	0	Presentation ±1
Clear and understandable		ar and understan	ndable	☐ Clear and understandable
Appropriate manner	l ` '	propriate mannei	r	Appropriate manner
Overall impression took of	Ove	erall impression		Overall impression
Reporter ±1 +1		nent ±1	0	Reviewer ±1 -0.6
technique(s)	solu	ponse to the repution		Provides a thorough review of report and discussion
Structure Explanation of formulae and	1 011	ows the strong an he report		Expresses own opinion about topics presented or discussed
symbols Appropriate models, conformity of dimensions	the	ds shortcomings o report		Relevance of questions to both th reporter and the opponent
Slides, on-site experiments, audio		evance of the que stribution to the c		Draws attention to points missed by the reporter or the opponent
∨ideo, as appropriate ☐ References, proper citations of	Commence of the Control of the Contr			This sheet will be collected by the
ideas and input of others Novelty of the report				This sheet will be com- fight assistant, so we can scan it and archive your partial grades – please
Contribution to the discussion				do not bend
Final Grade: Reporter	Final G	rade: Opponent	6 Revise	Final Grade: Reviewer after IOC feedback and approved by EC on 2011-11-03

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nd no.): 2 Room: H Stage: 3 Problem no.: 1 Fight (Round no.): 2 Room: H

A report should include:

• a presentation of the appropriate concepts, theories and principles of the problem • an explanation of the observed phenomena • an application of appropriate mathematics • reasonable experimental technique to gather and record data (or demonstrate the phenomena if appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • an attempt to communicate difficult or complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent challenged the reporter's understanding of the presented concepts, theories and principles • the opponent understood the appropriate mathematics presented ◆ the opponent critiqued the experimental technique used and questioned the validity of the data ◆ the opponent appreciated and highlighted the strengths and weaknesses of the report

A review should show that:

- the reviewer succeeded in giving an objective summary of the performances the reporter and opponent the reviewer appreciated the important aspects (especially the controversial ones) • the reviewer's personal opinion was in evidence (not just superficial observations) • such personal opinions were informative, non-trivial and demonstrated, where possible, the reviewer's understanding of concepts, theories, principles and appropriate mathematics used by the reporter and the opponent
- The grade for each of the three teams consists of a partial grade for physics, presentation and for their specific role.
- The reporter, opponent and reviewer each start with 5 points.
- Consider the following suggestions to add to or deduct from the initial 5 points.
- Solect each nartial grade from

	tion and <i>write it</i> in the corresponding box. o questions were posed or not finding shortco	omings if there were none to find.
Rep.: IRan 5	Opp.: Indon 5	Rev.: Neth. 5
Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions	Physics ±3 ☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions	Physics ±3 ☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of constants
☐ Accurate answers	Accurate answers	☐ Validity of conclusions ☐ Accurate answers
Presentation ±1 + 1 Clear and understandable Appropriate manner	Presentation ±1 ☐ Clear and understandable ☐ Appropriate manner	Presentation ±1 ☐ Clear and understandable ☐ Appropriate manner
Overall impression Reporter ±1	Overall impression Opponent ±1	Overall impression Reviewer ±1
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
Structure Explanation of formulae and symbols	☐ Shows the strong and weak points of the report ☐ Finds shortcomings or errors in the report	Expresses own opinion about topics presented or discussed Relevance of questions to both the
Appropriate models, conformity of dimensions Slides, on-site experiments, audio, video, as appropriate	Relevance of the questions Contribution to the discussion	reporter and the opponent Draws attention to points missed by the reporter or the opponent
References, proper citations of ideas and input of others		This sheet will be collected by the fight assistant, so we can scan it and
Novelty of the report		fight assistant, so we are archive your partial grades — please do not bend
Contribution to the discussion		do not benu

Final Grade: Reporter

Final Grade: Opponent

	Guidolinos	Fight (R	ound no.):	<u> 2</u>	_Room:		Stage: <u>3</u>	Probl	em no.:	15
Scoring	Guidelines	Juror: _	Eugen	Vo	T	Signature	e:	21/6	7	
			3				•		7	

• a presentation of the appropriate concepts, theories and principles of the problem • an explanation of the observed phenomena • an application of appropriate mathematics • reasonable experimental technique to gather and record data (or demonstrate the phenomena if appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • an attempt to communicate difficult or complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent challenged the reporter's understanding of the presented concepts, theories and principles • the opponent understood the appropriate mathematics presented • the opponent critiqued the experimental technique used and questioned the validity of the data • the opponent appreciated and highlighted the strengths and weaknesses of the report

A review should show that:

- the reviewer succeeded in giving an *objective summary* of the performances the *reporter* and *opponent* the reviewer appreciated the *important aspects* (especially the *controversial* ones) the reviewer's *personal opinion* was in evidence (*not* just *superficial observations*) such personal opinions were *informative*, *non-trivial* and demonstrated, where possible, the reviewer's *understanding* of *concepts*, *theories*, *principles* and *appropriate mathematics* used by the reporter and the opponent
- The grade for each of the three teams consists of a partial grade for physics, presentation and for their specific role.
- The reporter, opponent and reviewer each start with 5 points.
- Consider the following suggestions to add to or deduct from the initial 5 points.
- Select each partial grade from each section and write it in the corresponding box.

 Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find. 										
Rep.: IIah 5	Opp.: Indonesia 5	Rev.: Netholands 5								
Physics ±3	Physics ±3	Physics ±3								
Correct and relevant physics	Correct and relevant physics	Correct and relevant physics								
Scientific approach	☐ Scientific approach	☐ Scientific approach								
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions								
☐ Accurate answers	☐ Accurate answers	☐ Accurate answers								
Presentation ±1	Presentation ±1	Presentation ±1								
Clear and understandable	☐ Clear and understandable	☐ Clear and understandable								
Appropriate manner	☐ Appropriate manner	☐ Appropriate manner								
🛚 Overall impression	Overall impression	☐ Overall impression								
Reporter ±1	Opponent ±1	Reviewer ±1								
☐ Quality of experimental	The second secon									
technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion								
technique(s) Structure	solution Shows the strong and weak points	report and discussion Expresses own opinion about								
technique(s) Structure Explanation of formulae and	solution	report and discussion								
technique(s) Structure Explanation of formulae and symbols	solution Shows the strong and weak points	report and discussion Expresses own opinion about								
technique(s) Structure Explanation of formulae and	solution Shows the strong and weak points of the report Finds shortcomings or errors in	report and discussion Expresses own opinion about topics presented or discussed Relevance of questions to both the reporter and the opponent Draws attention to points missed								
technique(s) Structure Explanation of formulae and symbols Appropriate models, conformity	solution Shows the strong and weak points of the report Finds shortcomings or errors in the report	report and discussion Expresses own opinion about topics presented or discussed Relevance of questions to both the reporter and the opponent								
technique(s) Structure Explanation of formulae and symbols Appropriate models, conformity of dimensions Slides, on-site experiments, audio.	solution Shows the strong and weak points of the report Finds shortcomings or errors in the report Relevance of the questions	report and discussion Expresses own opinion about topics presented or discussed Relevance of questions to both the reporter and the opponent Draws attention to points missed by the reporter or the opponent								
technique(s) Structure Explanation of formulae and symbols Appropriate models, conformity of dimensions Slides, on-site experiments, audio, video, as appropriate	solution Shows the strong and weak points of the report Finds shortcomings or errors in the report Relevance of the questions	report and discussion Expresses own opinion about topics presented or discussed Relevance of questions to both the reporter and the opponent Draws attention to points missed by the reporter or the opponent								
technique(s) Structure Explanation of formulae and symbols Appropriate models, conformity of dimensions Slides, on-site experiments, audio, video, as appropriate References, proper citations of ideas and input of others	solution Shows the strong and weak points of the report Finds shortcomings or errors in the report Relevance of the questions	report and discussion Expresses own opinion about topics presented or discussed Relevance of questions to both the reporter and the opponent Draws attention to points missed by the reporter or the opponent								

Final Grade: Reporter

Final Grade: Opponent

Final Grade: Reviewer

Revised after IOC feedback and approved by EC on 2011-11-03

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Fight (Round no.): Room:	H Stage: 3 Problem no.: 45
Juror: Daniela Ivana	Signature:

Final Grade: Reviewer Revised after IOC feedback and approved by EC on 2011-11-03

A report should include:

• a presentation of the appropriate concepts, theories and principles of the problem • an explanation of the observed phenomena • an application of appropriate mathematics • reasonable experimental technique to gather and record data (or demonstrate the phenomena if appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • an attempt to communicate difficult or complex ideas in an effective and understandable manner

An opposition should show that:

• the opponent challenged the reporter's understanding of the presented concepts, theories and principles • the opponent understood the appropriate mathematics presented • the opponent critiqued the experimental technique used and questioned the validity of the data • the opponent appreciated and highlighted the strengths and weaknesses of the report

A review should show that:

Final Grade: Reporter

- the reviewer succeeded in giving an objective summary of the performances the reporter and opponent the reviewer appreciated the important aspects (especially the controversial ones) • the reviewer's personal opinion was in evidence (not just superficial observations) • such personal opinions were informative, non-trivial and demonstrated, where possible, the reviewer's understanding of concepts, theories, principles and appropriate mathematics used by the reporter and the opponent
- The grade for each of the three teams consists of a partial grade for physics, presentation and for their specific role.
- The reporter, opponent and reviewer each start with 5 points.
- Consider the following suggestions to add to or deduct from the initial 5 points.
- Select each partial grade from each section and write it in the corresponding box.

 Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find. 										
Rep.: Kauran Hedayen 5	Opp.: 5	Rev.: 5								
Physics ±3	Physics ±3	Physics ±3								
Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics								
Scientific approach	Scientific approach	☐ Scientific approach								
☐ Validity of conclusions	☐ Validity of conclusions	☐ Validity of conclusions								
☐ Accurate answers	☐ Accurate answers	☐ Accurate answers								
Presentation ±1	Presentation ±1	Presentation ±1								
Clear and understandable	☐ Clear and understandable	☐ Clear and understandable								
Appropriate manner	☐ Appropriate manner	☐ Appropriate manner								
Overall impression	Overall impression	Overall impression								
Reporter ±1	Opponent ±1	Reviewer ±1								
Quality of experimental technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion								
	Solution	/ * report and discussion								
☐ Structure	☐ Shows the strong and weak points	Expresses own opinion about								
☐ Explanation of formulae and	Shows the strong and weak points of the report	report and discussion								
Explanation of formulae and symbols Appropriate models, conformity	☐ Shows the strong and weak points	Expresses own opinion about								
Explanation of formulae and symbols	Shows the strong and weak points of the report Finds shortcomings or errors in	Expresses own opinion about topics presented or discussed Relevance of questions to both the reporter and the opponent Draws attention to points missed								
Explanation of formulae and symbols Appropriate models, conformity	☐ Shows the strong and weak points of the report ☐ Finds shortcomings or errors in the report	Expresses own opinion about topics presented or discussed Relevance of questions to both the reporter and the opponent Draws attention to points missed by the reporter or the opponent								
Explanation of formulae and symbols Appropriate models, conformity of dimensions Slides, on-site experiments, audio.	 ☐ Shows the strong and weak points of the report ☐ Finds shortcomings or errors in the report ☐ Relevance of the questions 	Expresses own opinion about topics presented or discussed Relevance of questions to both the reporter and the opponent Draws attention to points missed by the reporter or the opponent								
Explanation of formulae and symbols Appropriate models, conformity of dimensions Slides, on-site experiments, audio, video, as appropriate	 ☐ Shows the strong and weak points of the report ☐ Finds shortcomings or errors in the report ☐ Relevance of the questions 	Expresses own opinion about topics presented or discussed Relevance of questions to both the reporter and the opponent Draws attention to points missed by the reporter or the opponent								

		Fight (Round no.): Room	n: Stage: Problem no.:
•	Scoring Guidelii		Signature Sien-Chung H
		341011 12131 2313 1415	Signature, west - county -
	A report should include:		~
6	application of appropriate mathematics • r	ets, theories and principles of the problem • an e easonable experimental technique to gather and r experimental findings to draw suitable conclusion dable manner	record data (or demonstrate the phenomena if
	An opposition should show that:		
(o the opponent challenged the reporter's un appropriate mathematics presented • the opponent appreciated and highlighted the st	nderstanding of the presented concepts, theories a pponent critiqued the experimental technique used rengths and weaknesses of the report	and <i>principles</i> • the opponent understood the d and questioned the <i>validity</i> of the <i>data</i> • the
1	A review should show that:	***************************************	
s i	mportant aspects (especially the controver.	ctive summary of the performances the reporter a sial ones) • the reviewer's personal opinion was in on-trivial and demonstrated, where possible, the re d by the reporter and the opponent	evidence (not just superficial observations) •
***	The <i>reporter</i> , <i>opponent</i> and <i>reviewer</i> Consider the following <i>suggestions</i> to Select each partial grade from each se	consists of a partial grade for <i>physics, present</i> each <i>start with 5 points</i> . add to or <i>deduct</i> from the initial <i>5 points</i> . ction and <i>write it</i> in the corresponding box. no questions were posed or not finding shortcom.	
	and G	. 1	i there were none to find.
R	ep.:	Opp.: Indonesia 5	Rev.: Netherland 5
	40		
PI	rysics ±3	Physics ±3	Physics ±3
	Correct and relevant physics Scientific approach	Correct and relevant physics	☐ Correct and relevant physics
	Validity of conclusions	☐ Scientific approach	☐ Scientific approach
	Accurate answers	☐ Validity of conclusions ☐ Accurate answers	☐ Validity of conclusions ☐ Accurate answers
-	The section of the se	Accurate answers	Accurate answers
Pr	esentation ± 1 ± 0.5	Presentation ±1	Presentation ±1
	Clear and understandable	Clear and understandable	☐ Clear and understandable
	Appropriate manner	☐ Appropriate manner	☐ Appropriate manner
Ш	Overall impression	Overall impression —	Overall impression
Re	eporter ±1	Opponent ±1	Reviewer ±1 +0,2
	Quality of experimental Kao technique(s)	Response to the reporter's solution	Provides a thorough review of report and discussion
	Structure	Shows the strong and weak points of the report	Expresses own opinion about topics presented or discussed
	Explanation of formulae and symbols	Finds shortcomings or errors in the report	Relevance of questions to both the reporter and the opponent
Ш	Appropriate models, conformity of dimensions	Relevance of the questions	Draws attention to points missed
	Slides, on-site experiments, audio, video, as appropriate	Contribution to the discussion	by the reporter or the opponent
	References, proper citations of ideas and input of others		This sheet will be collected by the

fight assistant, so we can scan it and archive your partial grades - please do not bend

Final Grade: Opponent

References, proper citations of ideas and input of others

☑ Contribution to the discussion

☐ Novelty of the report

Final Grade: Reporter

Scoring Guideli	ines	Fight (Round no.) Juror:	Z Roo		Stage:	Problen	n no.: 1
A report should include:				**************************************	4		- modelistic
 a presentation of the appropriate conc application of appropriate mathematics a appropriate) linking of theoretical and complex ideas in an effective and understo 	reasonable (l <i>experiment</i>)	experimental techniqu al findings to draw s	ie to <i>gather</i> and	record	data (or demonstrate	the <i>phen</i>	nomena if
An opposition should show tha • the opponent challenged the reporter's appropriate mathematics presented • the opponent appreciated and highlighted the	understandi opponent cr	itiqued the experimen	t al technique us	and <i>pi</i> ed and	rinciples • the oppone questioned the validit	ent unders y of the d	stood the
A review should show that: • the reviewer succeeded in giving an objimportant aspects (especially the controve such personal opinions were informative, principles and appropriate mathematics up	<i>ersial</i> ones) • <i>non-trivial</i> ar	the reviewer's <i>person</i> Id demonstrated, whe	nal opinion was re possible, the	n evide	ence (not just superfici	ial observ	rations) =
 The grade for each of the three team The reporter, opponent and reviewe Consider the following suggestions t Select each partial grade from each s Don't punish missing 'answers' when 	er each start o add to or section and i	with 5 points. deduct from the init write it in the corres	ial <i>5 points</i> . ponding box.				
Rep.: Jran 5	Орр	.: Trolonosia	5	Re	ev.: Nefferlac	<u>ds</u>	5
Physics ±3	Physi	cs ±3	40,5	Ph	ysics ±3		Ô
Correct and relevant physics Scientific approach Validity of conclusions Accurate answers	☐ Sci	rrect and relevant entific approach lidity of conclusion curate answers			Correct and releve Scientific approach Validity of conclusion Accurate answers	ch sions	sics
Presentation ±1	Prese	ntation ±1	0	Pre	esentation ±1	Processing and the second	0
(□) Clear and understandable□ Appropriate manner⊞ Overall impression	□ Ар	ar and understand propriate manner erall impression	lable		Clear and underst Appropriate mani Overall impression	ner	**************************************
Reporter ±1 +	Орро	nent ±1	400	Re	viewer ±1	lanca de la companya	-0,5
Quality of experimental technique(s)	Res	sponse to the repoution	rter's	10.	Provides a thorou report and discuss	L gh revie	
☐ Structure	☐ Sho	ows the strong and the report	weak points		Expresses own on	inion ah	out
Explanation of formulae and symbols	☐ Fine	ds shortcomings or	errors in		topics presented of Relevance of ques		
Appropriate models, conformity of dimensions	the	report evance of the ques			reporter and the c	pponen	nt
Slides, on-site experiments, audio video, as appropriate		itribution to the di			Draws attention to by the reporter or	the opp	onent
References, proper citations of ideas and input of others				And the second of the second o	This sheet will be of fight assistant, so we	p (21) 250;	
				The state of the s	archive your partial	grades -	please
☐ Contribution to the discussion				Real Property and Control of Cont	do not bend		

Final Grade: Opponent

Final Grade: Reporter

