		Pr. 12.
	Fight (Round no.): Roo	m:Stage:Problem no.:
Scoring Guideli	nes Juror: Hong Tung	Signature:
A report should include: • a presentation of the appropriate concer	ots, theories and principles of the problem • an	
application of appropriate mathematics • 1	reasonable experimental technique to gather and experimental findings to draw suitable conclusi	record data (or demonstrate the phenomena if
An opposition should show that: • the opponent challenged the reporter's unappropriate mathematics presented • the component appreciated and highlighted the significant should be significant.	nderstanding of the presented concepts, theories apponent critiqued the experimental technique us	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 risial ones) • the reviewer's personal opinion was pon-trivial and demonstrated, where possible, the ed by the reporter and the opponent	in evidence (not just superficial observations) •
 The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each se 	consists of a partial grade for <i>physics, preser</i> each <i>start with 5 points</i> . <i>add</i> to or <i>deduct</i> from the initial <i>5 points</i> . In the corresponding box. The opening of the corresponding shorts are the corresponding shorts.	
- Grach Hen	Telano	
Rep.:	Opp: Ly dones (a 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 ☐ Accurate answers	☐ 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	Expresses own opinion about
Explanation of formulae and symbols	of the report Finds shortcomings or errors in	topics presented or discussed
Appropriate models, conformity of dimensions	Relevance of questions to both the reporter and the opponent	
Slides, on-site experiments, audio,	☐ Relevance of the questions ☐ 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
1		Second Control L

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Cooking Cuidali		Fight (F	lound no.)	: 4_	Room	:	\mathbb{S}_{-} Stage	: Pi	robler	n no.: <u>/</u> Ł
Scoring Guidelin	165	Juror: _	Peter	Meri	whe	Sign	nature:	Re	100	inelo
A report should include: • a presentation of the appropriate concep application of appropriate mathematics • re appropriate) • linking of theoretical and e complex ideas in an effective and understand	easonable e Experimente	experiment al findings	tal techniqu	ie to <i>gat</i>	ther and re	cord	data (or den	nonstrate th	e <i>phei</i>	nomena if
An opposition should show that: • the opponent challenged the reporter's ur appropriate mathematics presented • the opponent appreciated and highlighted the st.	nderstandin pponent <i>cri</i>	tiqued the	experimen	tal techi	theories a	nd <i>pr</i> I and	<i>inciples</i> • th questioned t	e opponent he <i>validity</i> o	under of the a	stood the
A review should show that:							1.	-		
 the reviewer succeeded in giving an object important aspects (especially the controvers such personal opinions were informative, no principles and appropriate mathematics used 	sial ones) • •n-trivial an	the reviev d demons	ver's <i>persor</i> trated, whe	i <i>al opini</i> re possil	on was in	evide	nce (not just	superficial	observ	vations) .
 The grade for each of the three teams The reporter, opponent and reviewer set Consider the following suggestions to see Select each partial grade from each see Don't punish missing 'answers' when no 	each <i>start</i> <i>add</i> to or o ction and v	with 5 pc deduct fro write it in	oints. om the init the corres	ial <i>5 po</i> pondin	<i>ints</i> . g box.					
Rep.: Jakon Poleral 5	1	: Um			5	Re	ev.: <u>Joje</u> Braz	buhna.	- Ignu	5
Physics ±3	Physi	cs ±3		0	f 0	Ph	ysics ±3			4-4-4
Correct and relevant physics	☑ Co	rrect and	l relevant	physic	S		Correct a	nd relevan	nt phy	'sics
Scientific approach		entific ap				1	Scientific			
☐ Validity of conclusions	I	•	conclusion	15			Validity o		ons	
Accurate answers	LI Aco	curate ar	iswers	P****		Ú	Accurate	answers		
Presentation ±1	Prese	ntatio	n ±1		10	Pre	esentati	on ±1		
Clear and understandable	☐ Cle	ar and u	nderstand	dable			Clear and	understar	ndable	e
Appropriate manner	I · ·	•	e manner				Appropria	te manne	r	
Overall impression	DO DV	erall imp	ression			J.E.	Overall im	pression		
Reporter ±1	Орро	nent ±	1	0	000	Re	viewer ±	:1		44
Quality of experimental technique(s)	☑ Res	ponse to	the repo	rter's			Provides a report and	thorough discussio	revie n	ew of
☐ Structure	☐ Sho	ws the s	trong and	l weak	points		Expresses	own opini	ion at	out
Explanation of formulae and symbols	☐ Find	he repor	t omings o	r error:	s in		topics pre Relevance	of question	ons to	both the
Appropriate models, conformity of dimensions		report	f the que:	ctions	T-450-continue and an analysis		reporter a	•	•	
Slides, on-site experiments, audio, video, as appropriate			to the d		on	L	Draws atte by the rep	orter or th	ie obl	ponent
References, proper citations of ideas and input of others	Tempo en Comunicación por porte de comunicación porte de				meda eda salahasa saja saja saja saja			will be coll ant, so we c	211 200	
\square Novelty of the report							fight assist archive yo	ant, so we s _{our partial gl}	rades -	– please
Contribution to the discussion							do not be	nd		

Final Grade: Opponent

Final Grade: Reporter

					W JA	K
Scoring Guideli	AAC	Fight (Round no.):	-		: Problem	n no.: <u>14</u>
scoring Guiden	IIC)	Juror: FAINC SWAMIN	isco	_ Signature:		£
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	SWAMIN	ATHAN.			-
A report should include: • a presentation of the appropriate concer application of appropriate mathematics • appropriate) • linking of theoretical and complex ideas in an effective and understand	reasonable <i>experiment</i>	experimental technique tal findings to draw su	to gather and	re cord data (or der	nonstrate the pher	nomena if
An opposition should show that • the opponent challenged the reporter's u appropriate mathematics presented • the o opponent appreciated and highlighted the s	<i>ınderstandi</i> opponent <i>cı</i>	ritiqued the experiment	al technique use	and <i>principles</i> • th d and questioned t	ie opponent under he <i>validity</i> of the <i>a</i>	stood the
A review should show that:			Web Annie Berner and B			
 the reviewer succeeded in giving an obje important aspects (especially the controver such personal opinions were informative, n principles and appropriate mathematics use 	rsial ones) « <i>on-trivial</i> a	 the reviewer's personant nd demonstrated, where 	<i>Il opinion</i> was in e possible, the re	n evidence (<i>not</i> just	t superficial observ	vations) •
The grade for each of the three teams 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 Don't punish missing 'answers' when	each <i>star</i> add to or ection and	t with 5 points. deduct from the initia write it in the corresp	al <i>5 points</i> . onding box.			
Rep.: CZECH 5	Орр	.: MDONESIA	5	Rev.:_ B	AZIL	5
Physics ±3	Phys	ics ±3	0	Physics ±3		Ó
Correct and relevant physics	i	orrect and relevant p	ohysics	☐ Correct a	nd relevant phy	'sics
Scientific approach	1	ientific approach		☐ Scientific		
☐ Validity of conclusions		alidity of conclusions	5	☐ Validity o	f conclusions	
Accurate answers	L Ac	ccurate answers	particular of the Section Sect	☐ Accurate	answers	***************************************
resentation ±1	Prese	entation ±1	FERRENCE	Presentati	on ±1	
Clear and understandable		ear and understanda	able	Clear and	understandable	е
Appropriate manner		propriate manner		☐ Appropria		
Overall impression		verall impression		Overall im	pression	
eporter ±1	Oppo	nent ±1	~~ <i>j</i>	Reviewer ±	± 1	· Security Control
Quality of experimental technique(s)	☑ Re so	sponse to the repor Iution	ter's	Provides a	thorough revie d discussion	ew of
] Structure	☑ Sh	ows the strong and the report	weak points	Expresses	own opinion ab	oout
Explanation of formulae and symbols	│ □ Fin	ids shortcomings or	errors in	│ ☑ Relevance	sented or discu- of questions to	both the
Appropriate models, conformity of dimensions		e report levance of the quest	tions	reporter a	ind the opponer	nt
Slides, on-site experiments, audio, video, as appropriate	1	ntribution to the dis		by the rep	ention to points porter or the opp at ~ h s	missed ponent
ń "	1			ı U		a salas es

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 \square Novelty of the report ☐ Contribution to the discussion

do not bend

Final Grade: Opponent

Final Grade: Reporter

pg. 12,13,17 Fight (Round no.): 4 Room: B Stage: 1 Problem no.: 14 Scoring Guidelines Juror: Nimit Russader Signature: 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. 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 .: Cruch Opp.: Indonesia 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 Response to the reporter's ☐ Provides a thorough review of technique(s) solution report and discussion ☐ Structure ☐ Shows the strong and weak points Expresses own opinion about of the report topics presented or discussed Explanation of formulae and symbols Finds shortcomings or errors in Relevance of questions to both the the report reporter and the opponent ☐ Appropriate models, conformity of dimensions ☐ Relevance of the questions Draws attention to points missed by the reporter or the opponent ☐ Slides, on-site experiments, audio, ☐ Contribution to the discussion video, as appropriate This sheet will be collected by the

Final Grade: Reporter

☐ Novelty of the report

References, proper citations of ideas and input of others

☐ Contribution to the discussion

Final Grade: Opponent

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

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fight assistant, so we can scan it and archive your partial grades - please

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		STATE OF THE PARTY						11

Fight (Round no.):4	Room:	B	Stage: _	<u></u>	Problem no.:	14
Juror: Ryo	LARTCHE	PR Sig	nature	e:			

Rej. 12.13, 17,

A	rep	ort	should	inc	lude:
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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.
- The reporter, opponent and reviewer each start with 5 points.
- Consider the following *suggestions* to *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.: Creeker 5	Opp.: Indonésia 5	Rev.: Brasil 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 glades
Contribution to the discussion		do not bend

Final Grade: Opponent

Final Grade: Reviewer EC on 2011-11-03

Sco

		1 12 17
Scoring Guidelii	Fight (Round no.): Roon	n: B Stage: 1 Problem no.: 12
scoring duideni	Juror: Dina Juadi	Signature:
A report should include:		
application of appropriate mathematics • r	ets, theories and principles of the problem • an e easonable 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 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)
 The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each set 	consists of a partial grade for <i>physics, present</i> each <i>start with 5 points.</i> add to or deduct from the initial <i>5 points</i> . ction and write it in the corresponding box. no questions were posed or not finding shorter	
Rep.: Cleck Republic 5	Opp.: Indonesia 5	Rev.: Brazil
Jalub	Limiardi	Gabriel 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 - Opt
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 do
Contribution to the discussion		do not bend

Final Grade: Reporter

Final Grade: Opponent

Rejected: 1,8
Stage: 2 Problem no.: 3
nature:
nation of the observed phenomena • and data (or demonstrate the phenomena if an attempt to communicate difficult or
rinciples • the opponent understood the questioned the validity of the data • the
epponent • the reviewer appreciated the ence (not just superficial observations) • er's understanding of concepts, theories,
and for their <i>specific role.</i>
gs if there were none to find.
ev. Foch Rep 5
nysics ±3
Correct and relevant physics
Scientific approach
Validity of conclusions Accurate answers
Particular delaconomico consecuente
esentation ±1
Clear and understandable
Appropriate manner Overall impression
eviewer ±1
Provides a thorough review of report and discussion
Expresses own opinion about topics presented or discussed
Relevance of questions to both the reporter and the opponent

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

Scoring Guidelines

Fight (Round no.): A Room:

A report should include:

• a presentation of the appropriate concepts, theories and principles of the problem • an explan application of appropriate mathematics • reasonable experimental technique to gather and record appropriate) • linking of theoretical and experimental findings to draw suitable conclusions • 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 presented concepts theories and presented concepts the reporter's understanding of the presented concepts. appropriate mathematics presented • the opponent critiqued the experimental technique used and 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 o important aspects (especially the controversial ones) • the reviewer's personal opinion was in evidence such personal opinions were informative, non-trivial and demonstrated, where possible, the reviewe 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
- The reporter apparent 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 shortco	omings if there were none to find.
Rep.: Indonesia 5	Opp.: Brazil 5	Rev. Foch Rep 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 topics presented or discussed
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 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 do archive your partial grades — please
☐ Contribution to the discussion		do not bend
Final Grade: Reporter	Final Grade: Opponent	Final Grade: Reviewer

Scoring Guidelines

Fight (F	Round no.): <u></u>	_ Room:	<u>B</u>	Stage:	2	Problem no.:	3
Juror: _	Peler	Renne	her	Signatur	e:	P.	Mercul	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.

 Select each partial grade from each sec 	each start with 5 points. add to or deduct from the initial 5 points. Ition and write it in the corresponding box. To questions were posed or not finding shortco	omings if there were none to find
Rep.: Mhai Dafui 5	Opp.: Burkara Sanhaga 5	Rev.: 1600 S Zah (tech /L 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
☐ 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
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
☐ Novelty of the report		fight assistant, so the fight assistant, so the archive your partial grades — please
Contribution to the discussion		do not bend
F. 10 1 7 1		

Final Grade: Reporter

Final Grade: Opponent

Cooring Cuidalin	Fight (Round no.):	₹ Room	n: B Stage: 2 Proble	m no.: <u>OS</u>
Scoring Guideling	JUIOI: IF WAREN F	(C-2	Signature:	3
	Schamina	-41-1		<)
A report should include: • a presentation of the appropriate concept application of appropriate mathematics • reappropriate) • linking of theoretical and excomplex ideas in an effective and understand	asonable experimental technique to <i>rperimental findings</i> to draw <i>suital</i> :	gather and i	record data (or demonstrate the ph	enomena if
An opposition should show that: • the opponent challenged the reporter's unappropriate mathematics presented • the opponent appreciated and highlighted the street	ponent <i>critiqued</i> the <i>experimental te</i>	chnique use	and <i>principles</i> • the opponent unde d and questioned the <i>validity</i> of the	erstood the data • the
A review should show that: • the reviewer succeeded in giving an object important aspects (especially the controversisuch personal opinions were informative, non principles and appropriate mathematics used	ial ones) • the reviewer's <i>personal op</i> n-trivial and demonstrated, where po	<i>inion</i> was ir	n evidence (not just superficial obse	rvations) •
 The grade for each of the three teams of the reporter, opponent and reviewer e Consider the following suggestions to a Select each partial grade from each section bon't punish missing 'answers' when no 	ach <i>start with 5 points.</i> Idd to or deduct from the initial 5 tion and write it in the correspond	<i>points</i> . ding box.		······································
Rep.: INDEN EST	Opp.: BRAZIL	5	Rev.: CZECH	5
Physics ±3	Physics ±3	0	Physics ±3	
☐ Correct and relevant physics☐ Scientific approach☐ Validity of conclusions☐ Accurate answers	☐ Correct and relevant phy☐ Scientific approach☐ Validity of conclusions☐ Accurate answers	sics	☐ Correct and relevant ph☐ Scientific approach☐ Validity of conclusions☐ Accurate answers	ysics
Presentation ±1	Presentation ±1	1/3000000000000000000000000000000000000	Presentation ±1	1,12,144
Clear and understandable Appropriate manner hat my day Overall impression	Clear and understandable Appropriate manner Overall impression	9	Clear and understandable Appropriate manner Overall impression	le
Reporter ±1	Opponent ±1	XL	Reviewer ±1	
Quality of experimental that technique(s)	Response to the reporter solution	'S	Provides a thorough rev	iew of
Structure	Shows the strong and we of the report	ak points	Expresses own opinion a topics presented or disc	about
Explanation of formulae and symbols	Finds shortcomings or err	ors in	Relevance of questions reporter and the opponer	to both the
Appropriate models, conformity of dimensions	Relevance of the question	าร	Draws attention to poin	ts missed
Slides, on-site experiments, audio, video, as appropriate	Contribution to the discus	ssion	by the reporter or the o	•
References, proper citations of ideas and input of others			This sheet will be collecte fight assistant, so we can so	~ K4 > 2
Novelty of the report			archive your partial grade.	, – please
Contribution to the discussion	berren		do not bend	**************************************
Final Grade: Reporter	Final Grade: Opponent	Revised	Final Grade: Reviewer after IOC feedback and approved by EC o	n 2011-11-03

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Fight (Round no	.): _4	Room: _	B	Stage: 2	Probler	n no.: <u>3</u>
Juror:	Nint	Pussa	du s	Signature	: my		-

and prin	ciples of t	he probler	n ⊛an <i>expl</i>	anation	of the <i>absen</i>	ved nhenom	ena o an
					of the <i>obser</i> t or <i>demonstr</i>		

 a presentation of the appropriate concepts, theories application of appropriate mathematics • reasonable e appropriate) • linking of theoretical and experimenta complex ideas in an effective and understandable manne

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.

	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.: Indonesia 5	Opp.: Brazil 5	Rev.: Czech 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		fight assistant, so we can archive your partial grades – please
Contribution to the discussion		do not bend
Final Grade: Reporter	Final Grade: Opponent Revised a	Final Grade: Reviewer fter IOC feedback and approved by EC on 2011-11-03

and the same		6	2			4500	8	e a	7	7 6)	
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9		Ø.	B	Si .	2	Waster Wood		M				

Scoring Guidelines	•	oom: B Stage: 2 Problem no.:
A report should include: • a presentation of the appropriate concepts, theorie application of appropriate mathematics • reasonable appropriate) • linking of theoretical and experiment complex ideas in an effective and understandable man	es and principles of the problem • experimental technique to gather a	an explanation of the observed phenomena • an and record data (or demonstrate the phenomena if
An opposition should show that: • the opponent challenged the reporter's understandia appropriate mathematics presented • the opponent of opponent appreciated and highlighted the strengths are	ritiqued the experimental technique	ries and principles • the opponent understood the used and questioned the validity of the data • the
A review should show that: • the reviewer succeeded in giving an objective sumn important aspects (especially the controversial ones) esuch personal opinions were informative, non-trivial as principles and appropriate mathematics used by the results.	the reviewer's personal opinion w nd demonstrated, where possible, tl	as in evidence (not just superficial observations)
The grade for each of the three teams consists of the <i>reporter</i> , <i>opponent</i> and <i>reviewer</i> each <i>start</i> . Consider the following <i>suggestions</i> to <i>add</i> to or Select each partial grade from each section and Don't punish missing 'answers' when no question	t with 5 points. deduct from the initial 5 points. write it in the corresponding box	« .
Rep.: Indonesia 5 Opp	:: BRasil 5	Rev.: Czech Rep. 5
Physics ±3 Phys	ics ±3 + 2	Physics ±3
Scientific approach Validity of conclusions	orrect and relevant physics ientific approach ilidity of conclusions curate answers	Correct and relevant physics Scientific approach Validity of conclusions Accurate answers

☐ Scientific approach

Physics ±3

☐ Validity of conclusions

☐ Accurate answers

Presentation ±1

☐ Clear and understandable

☐ Appropriate manner

☐ Overall impression

Reporter ±1

Quality of experimental 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

☐ Novelty of the report

☐ Contribution to the discussion

ПА

Presentation ±1

☐ Clear and understandable

☐ Appropriate manner

☐ Overall impression

Opponent ±1

Response to the reporter's solution

Shows the strong and weak points of the report

Finds shortcomings or errors in the report

☐ Relevance of the questions

☐ Contribution to the discussion

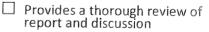
Presentation ±1

☐ Clear and understandable

☐ Appropriate manner

☐ Overall impression

Reviewer ±1



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

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



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



Final Grade: Reporter

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	April A		壑	9					8		Section 1	8	8	# #	Name of Street	

		8,4 3
Canina Caidali	Fight (Round no.): Roor	m: <u>B</u> Stage: <u>9</u> Problem no.: 3
Scoring Guideling	nes Juror: Oina Izadi	Signature: A Dadie
A report should include:		
application of appropriate mathematics • r	ots, theories and principles of the problem • and easonable experimental technique to gather and 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 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 ed 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	n evidence (not just superficial observations) .
 The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each ser 	consists of a partial grade for <i>physics</i> , <i>presen</i> each <i>start with 5 points</i> . <i>add</i> 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 shortc	
Rep.: Indonesia F	Opp.: <u>Brazil</u>	Rev.: <u>(2016</u>
Albert 5	Barbara 5	Tomas 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☐ 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	☐ 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 remark		fight assistant, so we can

Final Grade: Reporter

☐ Contribution to the discussion

☐ Novelty of the report

Final Grade: Opponent

Final Grade: Reviewer

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

do not bend

archive your partial grades - please

		Kejzeted: 2
	Fight (Round no.):	m: B Stage: 3 Problem no.: //
Scoring Guidelin	1es 1	/1
	Juror: Hong Jung	Signature:
A report should include:	V	
• a presentation of the appropriate concep	ts, theories and principles of the problem • an	explanation of the observed phenomena • an
application of appropriate mathematics • reappropriate) • linking of theoretical and e	easonable experimental technique to gather and xperimental findings to draw suitable conclusion	record data (or demonstrate the phenomena if
complex ideas in an effective and understand	dable manner	one is an occumpt to communicate unjurant of
An opposition should show that:		
• the opponent <i>challenged</i> the <i>reporter's ur</i> appropriate mathematics presented • the or	nderstanding of the presented concepts, theories oponent critiqued the experimental technique use	and <i>principles</i> • the opponent understood the
opponent appreciated and highlighted the st.	rengths and weaknesses of the report	of and questioned the valuary of the data v the
A review should show that:		
 the reviewer succeeded in giving an objectimportant aspects (especially the controvers) 	tive summary of the performances the reporter vial ones) • the reviewer's personal opinion was i	and opponent • the reviewer appreciated the
such personal opinions were <i>informative, no</i>	n-trivial and demonstrated, where possible, the r	reviewer's understanding of concepts, theories,
principles and appropriate mathematics used	a by the reporter and the opponent	
• 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 reporter, opponent and reviewer of the Consider the following suggestions to the following suggestions. 	each start with 5 points. add to or deduct from the initial 5 points.	
 Select each partial grade from each sec 	ction and write it in the corresponding box.	
 Don't punish missing 'answers' when n 	o questions were posed or not finding shorte	comings if there were none to find.
Rep.: Bratal -	Opp.: Ted Rep	Rev.: Indonesia
5	5	5
Dhusias 12		
Physics ±3	Physics ±3	Physics ±3
☐ Correct and relevant physics ☐ Scientific approach	☐ Correct and relevant physics☐ Scientific approach	Correct and relevant physics
☐ Validity of conclusions	☐ Validity of conclusions	☐ Scientific approach ☐ Validity of conclusions
Accurate answers	☐ Accurate answers	☐ Accurate answers
Presentation ±1	Presentation ±1	Presentation ±1
☑ Clear and understandable ☐ Appropriate manner	Clear and understandable Appropriate manner	☐ Clear and understandable
Overall impression	Overall impression	☐ Appropriate manner ☐ Overall impression
		E Coverai 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
Explanation of formulae and symbols	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 be archive your partial grades — please
Contribution to the discussion		do not bend
Final Grade: Reporter	Final Grade: Opponent	Final Grade: Reviewer after IOC feedback and approved by EC on 2011-11-03
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Scoring Gui	de	211	ne	S
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Fight (Round no.): _	Room:	_BStage:	3	Problem no.: 11
Juror: <u>Peter 7</u>	encher	Signature:	Poler	Normila

• 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 reporter, opponent and reviewer expensions. Consider the following suggestions to a select each partial grade from each second 	consists of a partial grade for <i>physics, present</i> each <i>start with 5 points</i> . add to or deduct from the initial <i>5 points</i> . ation and write it in the corresponding box. o questions were posed or not finding shortco	. ,
Rep.: Gara Guinsh 5	Opp.: <u>N#AT THNH</u> 5	Rev.: Samuel W 5
Physics ±3	Physics ±3	Physics ±3
□ Correct and relevant physics	☐ Correct and relevant physics	☐ Correct and relevant physics
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	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 can archive your partial grades – please
Contribution to the discussion		do not bend

Final Grade: Opponent

		January Comment			
	Fight (Round no.): Roor	n:Stage:Problem no.:			
Scoring Guidelii	105 Juror: PRANCISO	A			
	Sertmination	R///			
A report should include:		4.			
• a presentation of the appropriate concepapplication of appropriate mathematics • r	ts, theories and principles of the problem • an eleasonable experimental technique to gather and experimental findings to draw suitable conclusionable 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 rengths and weaknesses of the report	and <i>principles</i> • the opponent understood the data • 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 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 set 	consists of a partial grade for <i>physics, presen</i> each <i>start with 5 points</i> . <i>add</i> to or <i>deduct</i> from the initial <i>5 points</i> . ction and <i>write it</i> in the corresponding box. to questions were posed or not finding shortc				
Rep.: BRAZIL 5	Opp.: CZECH 5	Rev.: INDONESIA 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 symbols formulae and	of the report Finds shortcomings or errors in	topics presented or discussed Relevance of guestions 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	Julian.	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			

Final Grade: Opponent

Final Grade: Reporter

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Scoring	g Guidelines	wron Nirut

Fight (Round no.): 4-	Room: _	<u> </u>	tage: <u></u>	Problem no.: 11
Juror: Nirut Russadee		Signature:	not	

• 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	o questions were posed or not finding shortco	omings if there were none to find.
Rep.: Brazil 5	Opp.: Czerh 5	Rev.: Indonesia 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	power
	= 3110 113 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	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
Explanation of formulae and symbolsAppropriate models, conformity of dimensions	of the report Finds shortcomings or errors in the report	topics presented or discussed Relevance of questions to both the reporter and the opponent
symbols —	of the report Finds shortcomings or errors in the report	topics presented or discussed Relevance of questions to both the reporter and the opponent
symbols Appropriate models, conformity of dimensions Slides, on-site experiments, audio.	of the report Finds shortcomings or errors in the report Relevance of the questions	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 This sheet will be collected by the
symbols Appropriate models, conformity of dimensions Slides, on-site experiments, audio, video, as appropriate	of the report Finds shortcomings or errors in the report Relevance of the questions	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 This sheet will be collected by the fight assistant, so we can scan it and fight assistant, so we can scan it and archive your partial grades − please archive your partial grades − please
symbols Appropriate models, conformity of dimensions Slides, on-site experiments, audio, video, as appropriate References, proper citations of ideas and input of others	of the report Finds shortcomings or errors in the report Relevance of the questions	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

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



		Fight (R	ound no.)	:	_Room: _	<i>₩</i>	Stage: _	 Problem n
Scoring	Guidelines	Juror: _	llya	LIA RTC	LE Ma	Signature	::	21

11

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.

	tion and write it in the corresponding box. o questions were posed or not finding shortco	omings if there were none to find.		
Rep.: Beasil 5	Opp.: Czech Rep. 5	Rev.: Indonesia 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		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 5		

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

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		A.
Convince Control 1º	Fight (Round no.): Roor	n: <u>/}</u>
Scoring Guideling	nes Juror: Dinol I Kadi	_ Signature:
A report should include:	the three terms and activities to	
application of appropriate mathematics • r	ets, theories and principles of the problem • an e easonable experimental technique to gather and experimental findings to draw suitable conclusion edable manner	record data (or demonstrate the phenomena if
An opposition should show that:	-	
• the opponent <i>challenged</i> the <i>reporter's u</i>	nderstanding of the presented concepts, theories pponent critiqued the experimental technique use	and <i>principles</i> • the opponent understood the data • 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 contrivial and demonstrated, where possible, the red by the reporter and the opponent	evidence (not just superficial observations)
 The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each see 	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 write it in the corresponding box. no questions were posed or not finding shortc	
	l -	I
Rep.: Brazil 5	Opp.:	Rev.: Indonesia 5
~104A	what	Samue
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
U 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
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 can a archive your partial grades — please

Final Grade: Reporter

☐ Contribution to the discussion

Final Grade: Opponent

Final Grade: Reviewer

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

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