Scoring Guideli	Com APPA APPA	Fight (Round no.): _ luror:KABE			2	em no.: <u>17,</u>
A report should include: • a presentation of the appropriate conce application of appropriate mathematics • appropriate) • linking of theoretical and complex ideas in an effective and understa	reasonable exp experimental	erimental technique i	o <i>gather</i> and .	rec <mark>ord data (</mark> or <mark>de</mark>	monstrate the ph	enomena if
An opposition should show that • the opponent challenged the reporter's a appropriate mathematics presented • the opponent appreciated and highlighted the statements.	understanding o	ued the experimental	technique use	and <i>principles</i> • tl d and questioned	ne opponent unde the <i>validity</i> of the	erstood the data • the
A review should show that: • the reviewer succeeded in giving an objetimportant aspects (especially the controve such personal opinions were informative, in principles and appropriate mathematics us	<i>rsial</i> ones) • the non-trivial and c	e reviewer's <i>personal</i> lemonstrated, where i	opinion was in	n evidence (<i>not</i> ius	t superficial obse	rvations) e
 The grade for each of the three teams The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each se Don't punish missing 'answers' when 	r each <i>start wi</i> o <i>add</i> to or <i>dec</i> ection and <i>wri</i>	<i>th 5 points</i> . <i>luct</i> from the initial <i>te it</i> in the correspo	<i>5 points.</i> nding box.			1 .
Rep.: KOREA Jeehyun Kin 5	Opp.:	CHAINETE TAK	5	Rev.: Fo	Parce Balcevia	5
Physics ±3	Physics		3	Physics ±3	,	3
 □ Correct and relevant physics □ Scientific approach □ Validity of conclusions □ Accurate answers 	☐ Corre ☐ Scien ☐ Validi	ct and relevant ph tific approach ty of conclusions ate answers			nd relevant ph approach f conclusions	ysics
Presentation ±1	Present	ation ±1		Presentati	on ±1	
Clear and understandableAppropriate mannerOverall impression	☐ Appro	and understandab priate manner II impression	ole		understandab ate manner apression	le
Reporter ±1	Oppone	nt ±1	1	Reviewer :	+1	
Quality of experimental technique(s)		nse to the reporte	er's	│ │ □ Provides a	thorough revi d discussion	iew of
☐ Structure	☐ Shows	the strong and w	eak points	ł.	own opinion a sented or disci	bout
Explanation of formulae and symbols		report shortcomings or e	rrors in		sented or discue of questions t	
Appropriate models, conformity of dimensions	the re	port		reporter a	ind the oppone	ent
Slides, on-site experiments, audio, video, as appropriate		nce of the question to the discre		by the rep	ention to point orter or the op	s missed ponent
References, proper citations of ideas and input of others				This sheet	will be collected	f by the
☐ Novelty of the report	San Constitution of the Co		And the second s		tant, so we can so our partial grades	Christian
Contribution to the discussion				do not be	nd	

Final Grade: Reporter

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						Bassille	,			-			_	_	_	-		-

Final Grade: Reporter

Scoring Guideli		tht (Round no.):		n: <u> </u>	Stage: 1	Problem no.:
Scoring Guideni	Jur	or: Bühl	<u> </u>	_ Signature:	<u>Bir</u>	
A report should include: • a presentation of the appropriate concept application of appropriate mathematics • appropriate) • linking of theoretical and complex ideas in an effective and understant	easonable <mark>experi</mark> experimental find	mental technique t	o gather and	r ecord data (c	r demonstrate i	the <i>phenomena</i> 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>nderstanding</i> of a	d the <i>experimental</i>	technique use	and <i>principles</i> d and questio	• the opponen	it understood the of the data • the
A review should show that: • the reviewer succeeded in giving an obje important aspects (especially the controver such personal opinions were informative, no principles and appropriate mathematics use	<i>sial</i> ones) • the re on-trivial and der	eviewer's <i>personal</i> nonstrated, where p	<i>opinion</i> was in	r evidence (na	t just superficia	(Inhservations) .
 The grade for each of the three teams The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each se Don't punish missing 'answers' when in 	each <i>start with</i> <i>add</i> to or <i>dedu</i> ction and <i>write</i>	5 points. ct from the initial it in the correspo	<i>5 points</i> . nding box.			
Rep.: Korea 5	Opp.:	<u>aipli</u>	5	Rev.:_	France	5
Physics ±3 +3	Physics ±	:3	+ 3	Physics	±3	+1
 ☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers 	☐ Scientif	and relevant phic approach of conclusions e answers	iysics	☐ Scien☐ Validi	ect and releva tific approach ty of conclus rate answers	า
Presentation ±1	Presenta	tion ±1	+7	Present	ation ±1	0
☐ Clear and understandable☐ Appropriate manner☐ Overall impression	☐ Approp	nd understandab riate manner impression	ole	☐ Appro	and understa ppriate mann Ill impression	er
Reporter ±1	Opponen	t ±1	0	Review	er±1	0
Quality of experimental technique(s)	Respons	se to the reporte	r's	☐ Provid	les a thoroug t and discussi	h review of
☐ Structure		he strong and w	eak points	☐ Expre	sses own opir	nion about
Explanation of formulae and symbols	☐ Finds sh	· ortcomings or e	rrors in	☐ Releva	presented or ance of quest	ions to both the
Appropriate models, conformity of dimensions	the repo	ort ce of the questic	ns	*******	er and the op attention to	points missed
Slides, on-site experiments, audio, video, as appropriate	☐ Contribu	ition to the disci	ussion	by the	reporter or t	the opponent
References, proper citations of ideas and input of others				This s	heet will be co	ollected by the
Novelty of the report			A CONTRACTOR OF THE CONTRACTOR	archi	heet will be as assistant, so we ve your partial (grades – please

Final Grade: Opponent Final Grade: Reviewer

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

Fluid 1	Bridge
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Final Grade: Reviewer Revised after IOC feedback and approved by EC on 2011-11-03

Scoring Guideline	Si	corin	Q	G	U		d	e			n	e	
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5 Room: 15

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 sec Don't punish missing 'answers' when n 	ction and write it in the corresponding box. o questions were posed or not finding shortco	omings if there were none to find
Rep.: Korea (Jeehgun Kim) 5	Opp.: Chinese Taipe 5 (Yithsiang Shyu) 5	Rev.: France (Alexander Balcerac) 5
Physics ±3 +2	Physics ±3 +2	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
☐ Novelty of the report		This sheet will be constant and fight assistant, so we can scan it and archive your partial grades — please
Contribution to the discussion		do not bend
	1	

	m n o.: _
Scoring Guidelines Juror: By Land Signature: - Problem	

A	report	should	include:
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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. Stion and write it in the corresponding box. o questions were posed or not finding shortc	omings if there were none to find.
Rep.: Kovea 5	Opp.: Chruse Taints 5	Rev.: Trance 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 + 1/2
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		archive your partial grades
Contribution to the discussion		do not bend

Final Grade: Opponent

Fight (Round no.):		om: <u> </u>	Stage: _	1	Problem no.:	Carry,
Juror: Tomáš	BZDUŜ	EK Signatu	ıre:	<u></u>	B28-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

• 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 sec Don't punish missing 'answers' when n 	tion and write it in the corresponding box. o questions were posed or not finding shortco	omings if there were none to find.
Rep.: KOREA 5	Opp.: CH. TAIPET 5	Rev.: FRANCE 5
Physics ±3	Physics ±3 +4.5	Physics ±3 +S
☐ 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 + 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	☐ Praws 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 Revised a	Final Grade: Reviewer offer IOC feedback and approved by EC on 2011-11-03

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						in the same of		-	_	-		-		-	-	-	- California

Coordinate Carialalia	Fight (Round no.): Roor	m: B Stage: 1 Problem no.: 4
Scoring Guidelin	1es Juror: STANISLAN PANOS	Signature: Run- L
application of appropriate mathematics • r	ets, theories and principles of the problem • an eleasonable experimental technique to gather and experimental findings to draw suitable conclusions dable manner	record data (or demonstrate the phenomena if
An opposition should show that: • the opponent challenged the reporter's un appropriate 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 ed and questioned the <i>validity</i> of the <i>data</i> • the
important aspects (especially the controvers	ctive summary of the performances the reporter sial ones) • the reviewer's personal opinion was in the trivial and demonstrated, where possible, the red by the reporter and the opponent	n evidence (not just superficial observations) a
 The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each sec 	consists of a partial grade for <i>physics</i> , <i>presen</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. so questions were posed or not finding shortc	
Rep.: KOREA 5	Opp.: [H. TAIPEI 5	Rev.: FRANCE 5
Physics ±3 ☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers	Physics ±3 ☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers	Physics ±3 ☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers
Presentation ±1 ☐ Clear and understandable ☐ Appropriate manner ☐ Overall impression	Presentation ±1 ☐ Clear and understandable ☐ Appropriate manner ☐ Overall impression	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	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	Reviewer ±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 ☐ Draws attention to points missed by the reporter or the opponent
References, proper citations of ideas and input of others Novelty of the report		This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please

Final Grade: Reporter Final Grade: Opponent

1

☐ Contribution to the discussion

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

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Cooring C.::J-1:			m: B Stage: 2 Proble			
Scoring Guideli	nes Juror: KABE	ELKA	Signature: Kvld(? ? !!		
A report should include:						
• a presentation of the appropriate concepapplication of appropriate mathematics • appropriate) • linking of theoretical and complex ideas in an effective and understan	reasonable experimental technique <i>experimental findings</i> to draw <i>sui</i>	to <i>aather</i> and	record data (or demonstrate the nhi	enomena if		
An opposition should show that • the opponent challenged the reporter's u appropriate mathematics presented • the o opponent appreciated and highlighted the s	inderstanding of the presented conceptions of the presented conceptions of the experimental conception of the experimental conceptions of the experimental con	I technique use	and <i>principles</i> • the opponent unde ed and questioned the <i>validity</i> of the	erstood the data • the		
A review should show that:						
• the reviewer succeeded in giving an obje important aspects (especially the controver such personal opinions were informative, no principles and appropriate mathematics use	rsial ones) • the reviewer's <i>persona</i> on-trivial and demonstrated, where	opinion was i	n evidence (not just superficial obse	mational a		
 The grade for each of the three teams The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each se Don't punish missing 'answers' when it 	each start with 5 points. add to or deduct from the initial action and write it in the correspondent.	1 <i>5 points.</i> onding box.		ł.		
Rep.: Chirese Taipe: 5	Opp.: France Nicolas Bellutean	5	Rev.: Korea Jihyan Kim	5		
Physics ±3	Physics ±3	-4	Physics ±3	2		
Correct and relevant physics	☐ Correct and relevant p	hysics	Correct and relevant ph	ysics		
☐ 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	AND THE PARTY OF T	Presentation ±1			
Clear and understandable	☐ Clear and understanda	ble	☐ Clear and understandab	le		
☐ 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 report solution	er's	Provides a thorough revi	iew of		
Structure	Shows the strong and v	veak points	Expresses own opinion about topics presented or discussed			
☐ Explanation of formulae and symbols	Finds shortcomings or e	errors in	Relevance of questions t reporter and the oppone	o both th		
 Appropriate models, conformity of dimensions 	Relevance of the questi	ons	☐ Draws attention to point			
Slides, on-site experiments, audio, video, as appropriate	☐ Contribution to the disc		by the reporter or the op	ponent		
References, proper citations of ideas and input of others			This sheet will be collected fight assistant, so we can so			
Novelty of the report			fight assistant, so we can be archive your partial grades	- please		
Contribution to the discussion			a- not hend			

Final Grade: Reporter

	430CD					
Scoring Guideli	right (Round no.): Room Nes Juror: Room	m: B Stage: Problem no.: 1 Signature: Bu				
application of appropriate mathematics • 1	ots, theories and principles of the problem • an reasonable 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 u	nderstanding 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 controver	ctive summary of the performances the reporter is ial ones) • the reviewer's personal opinion was in the contrivial 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 	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 shorter.					
Rep.: tai pei 5	Opp.: France 5	Rev.: Korea 5				
Physics ±3 + 7	Physics ±3 + 1	Physics ±3 +2				
Correct and relevant physics	Correct and relevant physics	☐ Correct and relevant physics				
☐ Scientific approach☐ Validity of conclusions	☐ Scientific approach	☐ Scientific approach				
☐ Accurate answers	☐ Validity of conclusions ☐ Accurate answers	☐ Validity of conclusions ☐ Accurate answers				
+ 3	Theedrate driswers	Accurate answers				
Presentation ±1	Presentation ±1	Presentation ±1 + 1				
Clear and understandable	Clear and understandable	☐ Clear and understandable				
☐ Appropriate manner ☐ Overall impression	☐ 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 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	☐ Relevance of the questions ☐ 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				
Mayatty of the report		fight assistant, so we can				

Final Grade: Reporter

☐ Novelty of the report

 $\hfill\Box$ Contribution to the discussion

Final Grade: Opponent

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

do not bend

archive your partial grades - please

"Kising "Kubble
Room: B Stage: Problem no.: 6

Scoring Guidelines

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

Fight (Round no.)

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 use	d by the reporter and the opponent				
 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.: Chinege Taipe 5 Yen-Yu Lin) 5	Opp.: France (Nicolas Belluteau) 5	Rev.: Korea (Jihyun Kim) 5			
Physics ±3	Physics ±3	Physics ±3			
☐ Correct and relevant physics☐ Scientific approach☐ Validity of conclusions☐ Accurate answers	☐ Correct and relevant physics ☐ Scientific approach ☐ Validity of conclusions ☐ Accurate answers	☐ Correct and relevant physics ☐ Scientific approach ☐ 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 + 1/2			
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 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 to be archive your partial grades – please			
Contribution to the discussion		do not bend			
Final Grade: Reporter	Final Grade: Opponent				

Final Grade: Reporter

Scoring Guideli	MAC	m: B Stage: 2 Problem no.: 1				
Scoring Garacin	Juror: Byland	Signature:				
application of appropriate mathematics • i	ots, theories and principles of the problem • an reasonable experimental technique to gather and experimental findings to draw suitable conclusingable manner	record data (or demonstrate the phenomena if				
An opposition should show that: • the opponent challenged the reporter's u appropriate mathematics presented • the o opponent appreciated and highlighted the si	inderstanding 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 rsial ones) • the reviewer's personal opinion was con-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> . 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 shorte					
Rep.: Chihete Taipi 5	Opp.: France 5	Rev.: Korea 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 ☐ Accurate answers	☐ 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	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 are archive your partial grades – please				
Oontribution to the discussion		do not bend				

Final Grade: Opponent

Final Grade: Reviewer

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

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		-	_		•		-	other m	-	400-10	-6000	100	-	201	200	Addition.	45000	

Fight (Round no.):	Room:	Stage: _	2 Problem	1 no.: 16
Juror: Tomás	BEDUSEK	Signature:	- B	20

Α	rep	ort	shou	uld	in	clu	ıde:
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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:

- 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 announced and reviewer each start with Empires

 Select each partial grade from each sed 	add to or deduct from the initial 5 points. ction and write it in the corresponding box. o questions were posed or not finding shortco	omings if there were none to find.
Rep.: CHIWESE TAIPEI 5	Opp.: FEANCE 5	Rev.: LOCEA 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
6		

Final Grade: Reporter





Cooring Carial ali	Fight (Round no.): Roor	n: $\overline{\mathcal{B}}$ Stage: $\overline{\mathcal{A}}$ Problem no.: $\underline{\mathcal{M}}$				
Scoring Guidelin	1es Juror: STALISCAN PANOS	Signature: Ran-C				
application of appropriate mathematics • re	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	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	tive summary of the performances the reporter sial ones) • the reviewer's personal opinion was in the 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 sec 	consists of a partial grade for <i>physics</i> , <i>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. The opening of the present of the properties of the present of the					
Rep.: (H. TAIPE 1 5	Opp.: FRANCE 5	Rev.: KOREA 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	Accurate answers	日 Accurate answers				
Presentation ±1 $+ /$	Presentation ± 1 ± 0.5	Presentation ±1				
Clear and understandable	🖾 Clear and understandable	Elear and understandable				
☐ Appropriate manner	Appropriate manner	☐ Appropriate manner				
	Overall impression	Overall impression				
Reporter ±1	Opponent ±1 + 0,5	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 are fight assistant, so we are archive your partial grades — please				
Contribution to the discussion		do not bend				

Final Grade: Reporter

Final Grade: Opponent

Cassing Contability	Fight (Round no.)	:Ro	oom: B Stage:	3_ Problem no.: <u>15</u>
Scoring Guidelines	Juror: K A	BELVE	Signature:	Kidella
A ronart chould 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 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> t each start with 5 points. add to or deduct from the initial 5 points. etion and write it in the corresponding box. o questions were posed or not finding shortco	
Rep.: France Summel Colin 5	Opp.: Korea 5	Rev.: Chinese Taipei Young Hsu 5
Physics ±3	Physics ±3	Physics ±3
☐ Correct and relevant physics☐ Scientific approach☐ Validity of conclusions☐ Accurate answers	 □ Correct and relevant physics □ Scientific approach □ Validity of conclusions □ Accurate answers 	☐ Correct and relevant physics ☐ Scientific approach ☐ 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 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
Sinal Conduction 5	5-16-1 G	7

Final Grade: Reporter

Final Grade: Opponent L

Scoring Guidali	10.0 0	Fight (Round no.)			e: 3 Proble	em no.: <u>1</u>
Scoring Guideli	ries .	Juror: Bay	Les .	Signature:	五二	Millionnement describes des la section de propriet par describe par la company de la
A report should include: • a presentation of the appropriate conce application of appropriate mathematics • appropriate) • linking of theoretical and complex ideas in an effective and understand	reasonable e <i>experiment</i> e	experimental techniq al findings to draw :	ue to aather and	record data for de	manstrate the nha	enamena if
An opposition should show that • the opponent challenged the reporter's use appropriate mathematics presented • the copponent appreciated and highlighted the second component appreciated and highlighted and highlighted and highlighted appreciated and highlighted appreciated and highlighted appreciated and highlighted and highlighted appreciated and highlighted appreciated and highlighted appreciated and highlighted appreciated and highlighted appreciate	<i>inderstandir</i> Opponent <i>cri</i>	tiqued the experimer	n tal technique use	and <i>principles</i> • t ed and questioned	he opponent unde the <i>validity</i> of the	erstood the
A review should show that: • the reviewer succeeded in giving an objeimportant aspects (especially the controver such personal opinions were informative, in principles and appropriate mathematics use	rsial ones) ● <i>on-trivial</i> an	the reviewer's <i>perso</i> , d demonstrated, whe	<i>nal opinion</i> was i ere possible, the r	n evidence (not iu-	t superficial pheer	nuations) a
 The grade for each of the three teams The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each se Don't punish missing 'answers' when 	each <i>start</i> add to or a ection and a	<i>with 5 points.</i> <i>leduct</i> from the init <i>vrite it</i> in the corres	tial 5 points . sponding box.			ı.
Rep.: Funce 5	Орр.	: Vorla	5	Rev.: <u>+a</u>	inese	5
Physics ±3	Physi	cs ±3	+1	Physics ±3		+1
☐ Correct and relevant physics☐ Scientific approach☐ Validity of conclusions	☐ Scie	rect and relevant entific approach idity of conclusion		☐ Scientific	and relevant pho approach of conclusions	ysics
Accurate answers Presentation ±1		urate answers ntation ±1	+1	☐ Accurate Presentati		+1
☐ Clear and understandable ☐ Appropriate manner ☐ Overall impression	☐ Cle	ar and understand propriate manner trall impression		☐ Clear and	l understandabl ate manner	le
Reporter ±1	Oppo	nent ±1	0	Reviewer:	±1	+1
Quality of experimental technique(s)	Res	ponse to the repo	orter's	☐ Provides	a thorough revi d discussion	ew of
☐ Structure ☐ Explanation of formulae and symbols	☐ Sho of ti	ws the strong and ne report s shortcomings o		Expresses topics pre	oun opinion a esented or discu	ıssed
Appropriate models, conformity of dimensions	the	report vance of the que		reporter a	and the oppone ention to points	ent
Slides, on-site experiments, audio, video, as appropriate		tribution to the d		by the rep	orter or the op	ponent
References, proper citations of ideas and input of others					will be collected tant, so we can sca	3
Novelty of the report	The second secon			fight assis archive Y	our partial grades	– please

Final Grade: Reporter

6

Final Grade: Opponent



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Scoring Guidelii	Fight (Round no.): 5 Room Note: Lent Hogan	n: B Stage: 3 Problem no.:
application of appropriate mathematics • re	ts, theories and principles of the problem • an e easonable experimental technique to gather and a xperimental findings to draw suitable conclusion dable manner	record data (or demonstrate the phenomena if
An opposition should show that: • the opponent <i>challenged</i> the <i>reporter's ur</i> appropriate mathematics presented • the opponent appreciated and highlighted the st.	nderstanding of the presented concepts, theories opponent critiqued the experimental technique use 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
A review should show that:		
important aspects (especially the controvers	tive summary of the performances the reporter sial ones) • the reviewer's personal opinion was in in-trivial and demonstrated, where possible, the red by the reporter and the opponent	evidence (not just superficial observations) •
The <i>reporter</i> , <i>opponent</i> and <i>reviewer</i> endorseconsider the following <i>suggestions</i> to a Select each partial grade from each second Don't punish missing 'answers' when n	add to or deduct from the initial 5 points. ction and write it in the corresponding box. o questions were posed or not finding shortco	omings if there were none to find.
Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions	Opp.: Korea [Jaewon Oh] Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions	Rev.: (hirese laige) Young-Heal 5 Physics ±3 + 1 Correct and relevant physics Scientific approach Validity of conclusions
Accurate answers	☐ Accurate answers	Accurate answers
resentation ±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
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	Expresses own opinion about
Explanation of formulae and symbols Lots of variables	of the report Finds shortcomings or errors in	topics presented or discussed Relevance of questions to both the
Appropriate models, conformity	the report Missed some	reporter and the opponent
of dimensions Slides, on-site experiments, audio, video, as appropriate feedution word cuts of RHS.	☐ 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 archive your partial grades – please

 \square Novelty of the report

Final Grade: Reporter

 \Box Contribution to the discussion

do not bend

		Fight (Round no.):	5	B	a 2		Л
Scoring Guideli	nes	Juror: By Car			ure: 8	# Poble m no.:	-/1
A report should include: • a presentation of the appropriate concept application of appropriate mathematics • mat	reasonable e experimento	experimental technique al findings to draw su	to gather and	record da	ta (or <i>demonstrate</i> t	he pheno meni	or if
An opposition should show that: • the opponent challenged the reporter's u appropriate mathematics presented • the o opponent appreciated and highlighted the si	nderstandin pponent <i>cri</i>	tiqued the experimento	i l technique use	and <i>princ</i> ed and que	iples • the opponen estioned the validity	t understood t of the <i>data</i> • t	the the
A review should show that: • the reviewer succeeded in giving an objectimportant aspects (especially the controver such personal opinions were informative, no principles and appropriate mathematics use	<i>sial</i> ones) • <i>on-trivial</i> an	the reviewer's personal demonstrated, where	<i>l opinion</i> was i	n evidence	· (not just superficia	Lahseniations	a (:
 The grade for each of the three teams The reporter, opponent and reviewer Consider the following suggestions to Select each partial grade from each se Don't punish missing 'answers' when research 	each start add to or a ction and v	with 5 points. deduct from the initia write it in the corresp	l <i>5 points</i> . onding box.				
Rep.: Trance 5	Орр.	: Kovea	5	Rev	Taipei		
Physics ±3	Physi	cs ±3	+ 1	Phys	ics ±3)
 ✓ Correct and relevant physics ✓ Scientific approach ✓ Validity of conclusions ✓ Accurate answers 	☐ Scie	rrect and relevant p entific approach idity of conclusions curate answers	•	☐ Sc	orrect and releva cientific approach alidity of conclusi ccurate answers)	
Presentation ±1 -1/2		ntation ±1			entation ±1		
☐ Clear and understandable	l	ar and understanda	hle	l	entation II ear and understa	ndable.	
☐ Appropriate manner		oropriate manner	DIC .	ļ	propriate manne		
Overall impression		erall impression			erall impression		
Reporter ±1	Орро	nent ±1		Revie	ewer±1	+ 1/2	
Quality of experimental technique(s)	☐ Res	ponse to the report	er's	⊞ Pr	ovides a thoroug port and discussion	h review of	
☐ Structure	☐ Sho	ws the strong and v	veak points	☐ Ex	presses own onir	ion about	
Explanation of formulae and symbols	of the	he report Is shortcomings or a		to	pics presented or levance of questi	discussed	th
Appropriate models, conformity of dimensions	the	report evance of the quest		re _l	porter and the op	ponent	
Slides, on-site experiments, audio, video, as appropriate	l	tribution to the disc			aws attention to the reporter or t	he opponen	±a it
References, proper citations of ideas and input of others	· · · · · · · · · · · · · · · · · · ·			- Lower Control	nis sheet will be co	ilected by the	A. "C"
Novelty of the report	na di manana di				nis sheet will be so ght assistant, so we rchive your partial §	CBH Press	
Contribution to the discussion	77-1-1-2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1			a C	io not bend		

Final Grade: Reporter



S	CO			q	G	U	d	e	Rate State Comment	o dilegge		e	5	
				toon			 	-100	-	 -	•	4000	40000	

Scoring Guidel		oom: B Stage: 3 Problem no.: 15				
application of appropriate mathematics	 reasonable experimental technique to gather all experimental findings to draw suitable concl 	an <i>explanation</i> of the <i>observed phenomena</i> • an nd <i>record data</i> (or <i>demonstrate</i> the <i>phenomena</i> if <i>usions</i> • an attempt to communicate <i>difficult</i> or				
An opposition should show that • the opponent challenged the reporter's appropriate mathematics presented • the opponent appreciated and highlighted the	understanding of the presented concepts, theore opponent critiqued the experimental technique	<i>ies</i> and <i>principles</i> • the opponent understood the used and questioned the <i>validity</i> of the <i>data</i> • the				
important aspects (especially the control	ersial ones) • the reviewer's personal opinion wa non-trivial and demonstrated, where possible, th	ter and opponent • the reviewer appreciated the as in evidence (not just superficial observations) • are reviewer's understanding of concepts, theories,				
The <i>reporter</i> , <i>opponent</i> and <i>reviewe</i> Consider the following <i>suggestions</i> t Select each partial grade from each s	ns consists of a partial grade for <i>physics, preser</i> each <i>start with 5 points</i> . So <i>add</i> to or <i>deduct</i> from the initial <i>5 points</i> . Section and <i>write it</i> in the corresponding box In no questions were posed or not finding sho					
Rep.: FRANCE 5	Opp.: KOREA 5	Rev.: CHINESE TAIREI 5				
hysics ±3 Correct and relevant physics Scientific approach Validity of conclusions Accurate answers	Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions Accurate answers	Physics ±3 Correct and relevant physics Scientific approach Validity of conclusions Accurate answers				
resentation ±1	Presentation ±1 Clear and understandable Appropriate manner Overall impression	Presentation ±1				
eporter ±1 + .5 Quality of experimental technique(s)	Opponent ±1 Response to the reporter's solution	Reviewer ±1 Provides a thorough review of report and discussion				
Structure Explanation of formulae and	Shows the strong and weak point of the report	Expresses own opinion about topics presented or discussed				

Reporter ±1

Rep.: FRANCE

☐ Correct and relevant physics

☐ Scientific approach

☐ Accurate answers

Presentation ±1

☐ Appropriate manner

☐ Overall impression

☐ Validity of conclusions

☐ Clear and understandable

Physics ±3

Quality of experimental	1
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

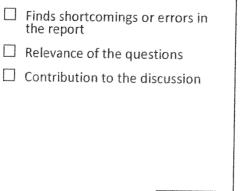
☐ Novelty of the report

Final Grade: Reporter

☐ Contribution to the discussion

Final Grade: Opponent

the report



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

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				Street, Street									-

Fight (Round no.): Room:	B Stage: 3 Problem	ino.: 15
Juror: STANISCAN PANOS S		
and principles of the problem • an explo experimental technique to gather and reco formula in the suitable conclusions • aler	rd data (or demonstrate the phen	omena if

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 application of appropriate mathematics • reasonable e appropriate) • linking of theoretical and experimenta complex ideas in an effective and understandable mann

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

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- 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. ction and write it in the corresponding box. o questions were posed or not finding shortco	omings if there were none to find.
Rep.: FRANCE 5	Opp.: KOREA 5	Rev.: [H. TAIPE] 5
Physics ±3	Physics ±3 +2	Physics ±3 +1,5
☐ 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 ± 0.5	Presentation ±1	Presentation ±1 + 0,5
☐ Clear and understandable	Elear and understandable	E Clear and understandable
	Appropriate manner	☐ Appropriate manner
Overall impression	☐ Overall impression	☐ Overall impression
Reporter ±1 –0,5	Opponent ±1 +0,5	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 com- archive your partial grades – please
Contribution to the discussion		do not bend
Final Grade: Reporter	Final Grade: Opponent	Final Grade: Reviewer