

# SCORESHEET

## REPORTER

Start from 1 and add/subtract

$$1 + 15 + 0.75 - 0.25 = 3$$

fight (round no.): 1 stage: 3 room: 202

problem no.:

Juror's name & signature:

PERSCA

reporter: GRAS - Steiner

opponent: ROAR

Post

reviewer: 9.56

TeK

REPORT								DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication		relevant arguments/responses	reporter's conduct at the discussion	
0 almost no	0 almost no	0 too few	0 no/ almost no	0 others' data, incorrectly cited	0 misunderstood	0 unclear, chaotic		0 too few	0 poor	0 concise and correct or no questions asked
1 some	1 some	1 some	1 some	1 review of sources, cited	1 partly	1 partly clear		1 some	1 some aspects fine	1 some incorrect, inconclusive or too long
2 fair	2 fair	2 fair	2 not well fitting	2 some own input	2 average	2 average		2 many	2 good	2 deeply incorrect or show deep misconceptions
3 good	3 good	3 well performed, sufficient number	3 deviations	3 + some interesting results	3 some aspects above average	3 some parts well done		3 + data/theory convincingly supported	3 some aspects efficient	
4 detailed demonstrative	4 quite detailed, correct	4 + results explained errors analysed	4 + theory limits explained, conclusive	4 considerable experimental or theoretical	4 interesting solution	4 overall clear, demonstrative		4 proved deep understanding	4 overall efficient	
5 deep and comprehensible, shows physical insight	5 detailed, complex, completely testable	5 + reproducible, convincing analysis	5 well fitting, deviations analysed, conclusive	5 considerable experimental and theoretical	5 greater extent than expected	5 + complex concepts well communicated				

NOTES:

FUKANIE ???

## OPPONENT

Start from 1 and add/subtract

$$1 + 1 + 3 + 3 - \square = 8$$

QUESTIONS ASKED		OPPOSITION (SPEECH)						DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS
		understanding of presentation	relevant topics addressed	own opinions presented	prioritisation	time management		relevant scientific topics	own opinions presented	opponent's conduct of the discussion	prioritisation	
0 too few, mostly irrelevant	0 relevant, aimed at resolving unclear points in the report	0 almost nothing	0 no or irrelevant	0 too few	0 no	0 poor		0 almost no	0 too few	0 poor	0 no	0 concise and correct or no questions asked
1	1	1 some main points	1 few	1 some	1 some	1 reasonable		1 few	1 some	1 some aspects fine	1 some	1 some incorrect, inconclusive or too long
2	2	2 main points	2 some	2 some correct	2 reasonable	2 fair		2 some	2 some correct	2 good	2 reasonable	2 deeply incorrect or show deep misconceptions
		3 all relevant points	3 many	3 many correct	3 fair	3 efficient		3 good	3 many correct	3 some aspects efficient	3 fair	
		4 practically all points	4 practically all	4 + improvement suggestions	4 very good	4 + all time used		4 new crucial point(s)	4 + improvement suggestions	4 overall efficient	4 very good	

NOTES:

## REVIEWER

Start from 1 and add/subtract

$$1 + 2 + 3 + 3.25 + 0.75 \pm \square - \square = 8$$

QUESTIONS ASKED		REVIEW OF REPORT			REVIEW OF OPPOSITION			DISCUSSION ANALYSIS		MISSED POINTS POINTED OUT	ANSWERS TO JURY QUESTIONS
		report evaluation & understanding	pros & cons	prioritisation	speech evaluation	pros & cons	prioritisation	discussion evaluation	correct own opinions		
0 too few, mostly irrelevant	0 relevant, meant to clarify unclear points	0 poor/wrong	0 irrelevant	0 no	0 poor/wrong	0 irrelevant	0 no	0 almost no	0 too few	0 irrelevant	0 concise and correct or no questions asked
1	1 + suitably allotted to Rep & Opp, most time used	1 partial	1 partially relevant	1 some	1 too short/long	1 partially relevant	1 some	1 too short/long	1 some	1 none	1 some incorrect, inconclusive or too long
2	2 + short, apt and clear, well prioritized, time managed efficiently	2 good	2 mostly adequate	2 reasonable	2 informative, apt	2 mostly adequate	2 reasonable	2 relevant parts	2 many	2 relevant, constructive	2 deeply incorrect or show deep misconceptions
		3 detailed, complex	3 fully adequate	3 good	3 condensed & accurate	3 fully adequate	3 good	3 accurate, conclusive	3 fully adequate		

NOTES:

CHAOS ?



# SCORESHEET

## REPORTER

Start from 1 and add/subtract

$$1 + 1.5 + 1 - 1 = 3$$

fight (round no.): 1 stage: 3 room: 102 problem no.: 6 Juror's name & signature: KAVICKY Ky  
reporter: SROBAROVA opponent: PARTOVA reviewer: A.SG

REPORT								DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS
	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication	relevant arguments/responses	reporter's conduct at the discussion	
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	unclear, chaotic	too few	poor	0 concise and correct or no questions asked 1 some incorrect, inconclusive or too long 2 deeply incorrect or show deep misconceptions -2
1	some	some	some	some	review of sources, cited	partly	partly clear	some	some aspects fine	
2	fair	fair	fair	not well fitting	some own input	average	average	many	good	
3	good	good	well performed, sufficient number	deviations qualitatively analysed	+ some interesting results	some aspects above average	some parts well done	+ data/theory convincingly supported	some aspects efficient	
4	detailed demonstrative	quite detailed, correct	+ results explained errors analysed	+ theory limits explained, conclusive	considerable experimental or theoretical	interesting solution	overall clear, demonstrative	proved deep understanding	overall efficient	
5	deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated			

NOTES:

d.f. balls  
 angle function depends on surface  
 → look about R & S  
 Blocking?  
 Both on the same → solve  
 Precision

## OPPONENT

Start from 1 and add/subtract

$$1 + 1.5 + 3.0 + 2.5 - 0 = 8$$

QUESTIONS ASKED		OPPOSITION (SPEECH)					DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS
		understanding of presentation	relevant topics addressed	own opinions presented	prioritisation	time management	relevant scientific topics	own opinions presented	opponent's conduct of the discussion	prioritisation	
0	too few, mostly irrelevant	almost nothing	no or irrelevant	too few	no	poor	almost no	too few	poor	no	0 concise and correct or no questions asked 1 some incorrect, inconclusive or too long 2 deeply incorrect or show deep misconceptions -2
1	relevant, aimed at resolving unclear points in the report	some main points	few	some	some	reasonable	few	some	some aspects fine	some	
2	+ short, apt and clear, well prioritized, all time used	main points	some	some correct	reasonable	fair	some	some correct	good	reasonable	
3		all relevant points	many	many correct	fair	efficient	good	many correct	some aspects efficient	fair	
4		practically all points	practically all	improvement suggestions	very good	+ all time used	new crucial point(s)	improvement suggestions	overall efficient	very good	

NOTES: Blocking  
 → habit

parameter dependencies

## REVIEWER

Start from 1 and add/subtract

$$1 + 2 + 3 + 1.5 + 1 + 0 - 0 = 8$$

QUESTIONS ASKED		REVIEW OF REPORT			REVIEW OF OPPOSITION			DISCUSSION ANALYSIS		MISSED POINTS POINTED OUT	ANSWERS TO JURY QUESTIONS
		report evaluation & understanding	pros & cons	prioritisation	speech evaluation	pros & cons	prioritisation	discussion evaluation	correct own opinions		
0	too few, mostly irrelevant	poor/wrong	irrelevant	no	poor/wrong	irrelevant	no	almost no	too few	irrelevant	0 concise and correct or no questions asked 1 some incorrect, inconclusive or too long 2 deeply incorrect or show deep misconceptions -2
1	relevant, meant to clarify unclear points	partial	partially relevant	some	too short/long	partially relevant	some	too short/long	some	none	
2	+ suitably allotted to Rep & Opp, most time used	good	mostly adequate	reasonable	informative, apt	mostly adequate	reasonable	relevant parts	many		
3	+ short, apt and clear, well prioritized, time managed efficiently	detailed, complex	fully adequate	good	condensed & accurate	fully adequate	good	accurate, conclusive	fully adequate	relevant, constructive	
4											

NOTES: d.f.

Please, suitably adjust your grades taking into regard the [1,10] range.



# SCORESHEET

fight (round no.): 1 stage: 3 room: 102

problem no.: 6

Juror's name & signature:

reporter: DANIEL GREG  
JROBERTO V A

opponent: RONALD DOBOS  
POSTEVA

reviewer: TEREZA ROSKINOVIC  
1.3G

## REPORTER

Start from 1 and add/subtract

1 + 3 + 1 - 1 = 4

## REPORT

	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	unclear, chaotic
1	some	some	some	some	review of sources, cited	partly	partly clear
2	fair	fair	fair	not well fitting	some own input	average	average
3	good	good	well performed, sufficient number	deviations qualitatively analysed	+ some interesting results	some aspects above average	some parts well done
4	detailed demonstrative	quite detailed, correct	+ results explained errors analysed	+ theory limits explained, conclusive	considerable experimental or theoretical	interesting solution	overall clear, demonstrative
5	deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated

## DISCUSSION WITH OPPONENT

	relevant arguments/responses	reporter's conduct at the discussion
0	too few	poor
1	some	some aspects fine
2	many	good
3	+ data/theory convincingly supported	some aspects efficient
4	proved deep understanding	overall efficient

## ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS

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

## NOTES:

• tape  
• How balls were joined together?  
• Blowing by them by tubes? which of those are moment of inertia should be taken into account.  
• Slide 16  
•  $\sin \theta \cos \theta = \frac{I_3}{I_1} \left( \frac{1 - 2MgR/I_3 \Omega^2}{\Omega^2 - I_3/I_1} \right)$   
•  $\sqrt{1 - \cos^2 \theta} \cos \theta = \frac{I_3}{I_1} \left( \frac{1 - 2MgR/I_3 \Omega^2}{\Omega^2 - I_3/I_1} \right)$   
•  $(1 - \cos^2 \theta) \cos^2 \theta = (C) \frac{AB}{\Omega^2 + B} + \frac{B}{\Omega^2}$   
•  $\cos^2 \theta = \frac{AB}{\Omega^2 + B} + \frac{B}{\Omega^2}$   
•  $x = -\frac{B}{2} \pm \sqrt{\frac{B^2}{4} + \frac{AB}{\Omega^2}}$   
• joining them together "sentence"

## OPPONENT

Start from 1 and add/subtract

1 + 2 + 3.5 + 3.0 - 0 = 9

## QUESTIONS ASKED

- 0 too few, mostly irrelevant
- 1 relevant, aimed at resolving unclear points in the report
- 2 + short, apt and clear, well prioritized, all time used

## OPPOSITION (SPEECH)

	understanding of presentation	relevant topics addressed	own opinions presented	prioritisation	time management
0	almost nothing	no or irrelevant	too few	no	poor
1	some main points	few	some	some	reasonable
2	main points	some	some correct	reasonable	fair
3	all relevant points	many	many correct	fair	efficient
4	practically all points	practically all	+ improvement suggestions	very good	+ all time used

## DISCUSSION WITH REPORTER

	relevant scientific topics	own opinions presented	opponent's conduct of the discussion	prioritisation
0	almost no	too few	poor	no
1	few	some	some aspects fine	some
2	some	some correct	good	reasonable
3	good	many correct	some aspects efficient	fair
4	new crucial point(s)	+ improvement suggestions	overall efficient	very good

## ANSWERS TO JURY and REVIEWER'S QUESTIONS

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

## NOTES:

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• Folie 958 & 959  
• Folie 960 & 961  
• Folie 962 & 963  
• Folie 964 & 965  
• Folie 966 & 967  
• Folie 968 & 969  
• Folie 970 & 971  
• Folie 972 & 973  
• Folie 974 & 975  
• Folie 976 & 977  
• Folie 978 & 979  
• Folie 980 & 981  
• Folie 982 & 983  
• Folie 984 & 985  
• Folie 986 & 987  
• Folie 988 & 989  
• Folie 990 & 991  
• Folie 992 & 993  
• Folie 994 & 995  
• Folie 996 & 997  
• Folie 998 & 999  
• Folie 1000 & 1001  
• Folie 1002 & 1003  
• Folie 1004 & 1005  
• Folie 1006 & 1007  
• Folie 1008 & 1009  
• Folie 1010 & 1011  
• Folie 1012 & 1013  
• Folie 1014 & 1015  
• Folie 1016 & 1017  
• Folie 1018 & 1019  
• Folie 1020 & 1021  
• Folie 1022 & 1023  
• Folie 1024 & 1025  
• Folie 1026 & 1027  
• Folie 1028 & 1029  
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• Folie 1032 & 1033  
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• Folie 1064 & 1065  
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• Folie 1068 & 1069  
• Folie 1070 & 1071  
• Folie 1072 & 1073  
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• Folie 1078 & 1079  
• Folie 1080 & 1081  
• Folie 1082 & 1083  
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• Folie 1096 & 1097  
• Folie 1098 & 1099  
• Folie 1100 & 1101  
• Folie 1102 & 1103  
• Folie 1104 & 1105  
• Folie 1106 & 1107  
• Folie 1108 & 1109  
• Folie 1110 & 1111  
• Folie 1112 & 1113  
• Folie 1114 & 1115  
• Folie 1116 & 1117  
• Folie 1118 & 1119  
• Folie 1120 & 1121  
• Folie 1122 & 1123  
• Folie 1124 & 1125  
• Folie 1126 & 1127  
• Folie 1128 & 1129  
• Folie 1130 & 1131  
• Folie 1132 & 1133  
• Folie 1134 & 1135  
• Folie 1136 & 1137  
• Folie 1138 & 1139  
• Folie 1140 & 1141  
• Folie 1142 & 1143  
• Folie 1144 & 1145  
• Folie 1146 & 1147  
• Folie 1148 & 1149  
• Folie 1150 & 1151  
• Folie 1152 & 1153  
• Folie 1154 & 1155  
• Folie 1156 & 1157  
• Folie 1158 & 1159  
• Folie 1160 & 1161  
• Folie 1162 & 1163  
• Folie 1164 & 1165  
• Folie 1166 & 1167  
• Folie 1168 & 1169  
• Folie 1170 & 1171  
• Folie 1172 & 1173  
• Folie 1174 & 1175  
• Folie 1176 & 11



## SCORESHEET

### REPORTER

Start from 1 and add/subtract

$$1 + 2 + 1 - 0,6 = 3$$

fight (round no.): 1 stage: 3 room: 102 problem no.: 6 Juror's name & signature: JAROSLAV TÓBIK J.T.G.2  
reporter: ŠROBÁROVA, D. GREŠ opponent: POŠTOVÁ R. DOBOŠ reviewer: 1SG T. ZUSKINOVA

REPORT								DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS
	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication	relevant arguments/responses	reporter's conduct at the discussion	
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	unclear, chaotic	too few	poor	0 concise and correct or no questions asked
1	some	some	some	some	review of sources, cited	partly	partly clear	some	some aspects fine	
2	fair	fair	fair	not well fitting	some own input	average	average	many	good	-1 some incorrect, inconclusive or too long
3	good	good	well performed, sufficient number	deviations qualitatively analysed	+ some interesting results	some aspects above average	some parts well done	+ data/theory convincingly supported	some aspects efficient	-2 deeply incorrect or show deep misconceptions
4	detailed demonstrative	quite detailed, correct	+ results explained errors analysed	+ theory limits explained, conclusive	considerable experimental or theoretical	interesting solution	overall clear, demonstrative	proved deep understanding	overall efficient	
5	deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated			

NOTES: STEINER LAW NOT SENTENCE! NO BLOWING BY STRAW! Závisí rychlost rotácie a uhel?

### OPPONENT

Start from 1 and add/subtract

$$1 + 1,5 + 3,2 + 3 - 0,2 = 9$$

QUESTIONS ASKED		OPPOSITION (SPEECH)					DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS
		understanding of presentation	relevant topics addressed	own opinions presented	prioritisation	time management	relevant scientific topics	own opinions presented	opponent's conduct of the discussion	prioritisation	
0	too few, mostly irrelevant	almost nothing	no or irrelevant	too few	no	poor	almost no	too few	poor	no	0 concise and correct or no questions asked
1	relevant, aimed at resolving unclear points in the report	some main points	few	some	some	reasonable	few	some	some aspects fine	some	
2	+ short, apt and clear, well prioritized, all time used	main points	some	some correct	reasonable	fair	some	some correct	good	reasonable	-1 some incorrect, inconclusive or too long
3		all relevant points	many	many correct	fair	efficient	good	many correct	some aspects efficient	fair	-2 deeply incorrect or show deep misconceptions
4		practically all points	practically all	+ improvement suggestions	very good	+ all time used	new crucial point(s)	+ improvement suggestions	overall efficient	very good	

NOTES:

mysleli si ze na pohyb má väčší vplyv dĺžka a podlažka alebo o vzdial.

### REVIEWER

Start from 1 and add/subtract

$$1 + 1,5 + 2 + 1,5 + 1 - 0,2 = 7$$

QUESTIONS ASKED		REVIEW OF REPORT			REVIEW OF OPPOSITION			DISCUSSION ANALYSIS		MISSED POINTS POINTED OUT	ANSWERS TO JURY QUESTIONS
		report evaluation & understanding	pros & cons	prioritisation	speech evaluation	pros & cons	prioritisation	discussion evaluation	correct own opinions		
0	too few, mostly irrelevant	poor/wrong	irrelevant	no	poor/wrong	irrelevant	no	almost no	too few	-1 irrelevant	0 concise and correct or no questions asked
1	relevant, meant to clarify unclear points	partial	partially relevant	some	too short/long	partially relevant	some	too short/long	some	0 none	
2	+ suitably allotted to Rep & Opp, most time used	good	mostly adequate	reasonable	informative, apt	mostly adequate	reasonable	relevant parts	many	1 relevant, constructive	-1 some incorrect, inconclusive or too long
3	+ short, apt and clear, well prioritized, time managed efficiently	detailed, complex	fully adequate	good	condensed & accurate	fully adequate	good	accurate, conclusive	fully adequate	-2 deeply incorrect or show deep misconceptions	

NOTES:



## SCORESHEET

### REPORTER

Start from 1 and add/subtract

$$1 + 2 + 1 - \square = 4$$

fight (round no.): 1 stage: 3 room: 102 problem no.: 6 Juror's name & signature: ADAMUSCIN

reporter: SR. GRES

opponent: POS DOBOS

reviewer: ISG ZUSEKOLY

REPORT							DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS	
	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication	relevant arguments/responses	reporter's conduct at the discussion	
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	unclear, chaotic			
1	some	some	some	some	review of sources, <del>cited</del>	partly	partly clear	too few	poor	0
2	fair	fair	fair	not well fitting	some own input	average	average	some	some aspects fine	
3				deviations				many	good	1
4	good	good	well performed, sufficient number	qualitatively analysed	+ some interesting results	some aspects above average	some parts well done			
5	detailed	quite detailed, correct	+ results explained	+ theory limits explained, conclusive	considerable experimental or theoretical	interesting solution	overall clear, demonstrative	+ data/theory convincingly supported	some aspects efficient	-1
6	demonstrative		errors analysed							
7	deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated	proved deep understanding	overall efficient	-2

NOTES:

### OPPONENT

Start from 1 and add/subtract

$$1 + 1.5 + 3 + 2.5 - \square = 8$$

QUESTIONS ASKED		OPPOSITION (SPEECH)					DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS
		understanding of presentation	relevant topics addressed	own opinions presented	prioritisation	time management	relevant scientific topics	own opinions presented	opponent's conduct of the discussion	prioritisation	
0	too few, mostly irrelevant	almost nothing	no or irrelevant	too few	no	poor	almost no	too few	poor	no	0 ..... concise and correct or no questions asked
1	relevant, aimed at resolving unclear points in the report	some main points	few	some	some	reasonable	few	some	some aspects fine	some	
2	+ short, apt and clear, well prioritized, all time used	main points	some	some correct	reasonable	fair	some	some correct	good	reasonable	-1 ..... some incorrect, inconclusive or too long
3		all relevant points	many	many correct	fair	efficient	good	many correct	some aspects efficient	fair	
4		practically all points	practically all	+ improvement suggestions	very good	+ all time used	new crucial point(s)	+ improvement suggestions	overall efficient	very good	-2 ..... deeply incorrect or show deep misconceptions

NOTES:

### REVIEWER

Start from 1 and add/subtract

$$1 + 2.1 + 2.5 + 2.5 + 1.5 \pm 0.5 - \square = 8$$

QUESTIONS ASKED		REVIEW OF REPORT			REVIEW OF OPPOSITION			DISCUSSION ANALYSIS		MISSED POINTS POINTED OUT	ANSWERS TO JURY QUESTIONS
		report evaluation & understanding	pros & cons	prioritisation	speech evaluation	pros & cons	prioritisation	discussion evaluation	correct own opinions		
0	too few, mostly irrelevant	poor/wrong	irrelevant	no	poor/wrong	irrelevant	no	almost no	too few	-1 ..... irrelevant	0 ..... concise and correct or no questions asked
1	relevant, meant to clarify unclear points	partial	partially relevant	some	too short/long	partially relevant	some	too short/long	some	0 ..... none	
2	+ suitably allotted to Rep & Opp, most time used	good	mostly adequate	reasonable	informative, apt	mostly adequate	reasonable	relevant parts	many	-1 ..... some incorrect, inconclusive or too long	-1 ..... some incorrect, inconclusive or too long
3	+ short, apt and clear, well prioritized, time managed efficiently	detailed, complex	fully adequate	good	condensed & accurate	fully adequate	good	accurate, conclusive	fully adequate	-2 ..... relevant, constructive	

NOTES:

Please, suitably adjust your grades taking into regard the [1,10] range.



reviewer: PLR

Rong

$$\boxed{1} + \boxed{4} + \boxed{2,75} - \boxed{0,5} = \boxed{7}$$

	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	unclear, chaotic
1	some	some	some	some	review of sources, cited	partly	partly clear
2	fair	fair	fair	not well fitting	some own input	average	average
3	good	good	well performed, sufficient number	deviations qualitatively analysed	+ some interesting results	some aspects above average	some parts well done
4	detailed demonstrative	quite detailed, correct	+ results explained errors analysed	+ theory limits explained, conclusive	considerable experimental <u>or</u> theoretical	interesting solution	overall clear, demonstrative
5	deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental <u>and</u> theoretical	greater extent than expected	+ complex concepts well communicated

	relevant arguments/responses	reporter's conduct at the discussion
0	too few	poor
1	some	some aspects fine
2	many	good
3	+ data/theory convincingly supported	some aspects efficient
4	proved deep understanding	overall efficient

0 ..... concise and correct or  
no questions asked

1 ..... some incorrect,  
inconclusive or too long

2 ..... deeply incorrect or show  
deep misconceptions

KAM IDE 80% ENERGIE???

$$\boxed{1} + \boxed{25} + \boxed{1} + \boxed{0.5} - \boxed{\phantom{00}} = \boxed{4}$$

- 0 ..... too few, mostly irrelevant
- 1 ..... relevant, aimed at resolving unclear points in the report
- 2 ..... + short, apt and clear, well prioritized, all time used

	understanding of presentation	relevant topics addressed	own opinions presented	prioritisation	time management
0	almost nothing	no or irrelevant	too few	no	poor
1	some main points	few	some	some	reasonable
2	main points	some	some correct	reasonable	fair
3	all relevant points	many	many correct	fair	efficient
4	practically all points	practically all	+ improvement suggestions	very good	+ all time used

	relevant scientific topics	own opinions presented	opponent's conduct of the discussion	prioritisation
0	almost no	too few	poor	no
1	few	some	some aspects fine	some
2	some	some correct	good	reasonable
3	good	many correct	some aspects efficient	fair
4	new crucial point(s)	+ improvement suggestions	overall efficient	very good

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

	practically, all points	practically, all	suggestions	very good	all time used
--	-------------------------	------------------	-------------	-----------	---------------

$$\boxed{1} + \boxed{1.75} + \boxed{2} + \boxed{1.75} + \boxed{2} + \boxed{\phantom{00}} - \boxed{\phantom{00}} = \boxed{8}$$

- 0 — too few, mostly irrelevant
- relevant, meant to clarify unclear points
- 1 — + suitably allotted to Rep & Opp,  
most time used
- 2 — + short, apt and clear, well prioritized,  
time managed efficiently

	report evaluation & understanding	pros & cons	prioritisation
1	poor/wrong	irrelevant	no
2	partial	partially relevant	some
3	good	mostly adequate	reasonable
4	detailed, complex	fully adequate	good

	speech evaluation	pros & cons	prioritisation
0	poor/wrong	irrelevant	no
1	too short/long	partially relevant	some
2	informative, apt	mostly adequate	reasonable
3	condensed & accurate	fully adequate	good

	discussion evaluation	correct own opinions
0	almost no	too few
1	too short/long	some
2	relevant parts	many
3	accurate, conclusive	fully adequate

$\sim 1$  ..... irrelevant  
 .....  
 .....  
 0 ..... none  
 .....  
 .....  
 1 ..... relevant,  
 ..... constructive

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

PRODUCE, 20% newitz also kritisch



MATEJ BÄDIN

fight (round no.): 1 stage: 2 room: 102 problem no.: 17 Juror's name & signature:

opponent:

reporter: BRUNO PETRUS

1. ANALYTICAL

reviewer:

—

## REPORTER

Start from 1 and add/subtract

$$4 + 1$$
$$9 = \square - 57$$

## REPORT

NOTES: Measurement of Young's Modulus

Diagram of a chromosome showing a centromere and a telomere labeled "end".

Q: Also in pressure weathered  $\text{Ca}^{2+}$  → small banding

Great film?  
different  
periods

Slide 11:  $18294 \mid 18294$   
estimate to price  
cost to price

↑  
↓  
vertical movement

REPORT									
		7		6		5		4	
phenomenon explanation	almost no	some	fair	↕	good	detailed	demonstrative	deep and comprehensible,	shows physical insight
	almost no	some	fair	↕	good	quite detailed,	+ results explained	correct,	completely testable
theory/model	almost no	some	fair	↕	well performed,	+ theory limits	explained, conclusive	well fitting, deviations	analysed, conclusive
relevant experiments	too few	some	fair	↕	deviations	+ some interesting results	considerable experimental	and theoretical	greater extent
comparison between theory and experiment	no / almost no	some	not well fitting	↕	review of sources, cited	some own input	interesting	than expected	science communication
own contribution	others' data, incorrectly cited	partly	partly	↕	misunderstood	partly	partly	partly	task fulfillment
task fulfillment	misunderstood	partly	partly	↕	average	some aspects	above average	overall clear,	science communication
science communication	unclear, chaotic	partly clear	average	↕	some parts	well done	overall clear,	+ complex concepts well	science communication

DISCUSSION WITH OPPONENT	
relevant arguments/responses	reporter's conduct at the discussion
too few	poor
some	some aspects fine
many	good
+ data/theory	some aspects
convincingly supported	efficient
proved deep understanding	overall efficient

ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS	
concise and correct or no questions asked	0
some incorrect,	1
inconclusive or too long	2
deeply incorrect or show deep misconceptions	3

## OPPONENT

Start from 1 and add/subtract

$$0 + 1$$
$$9 = 0 - 0.8 + 0.2$$

## QUESTIONS ASKED

too few, mostly irrelevant  
relevant, aimed at resolving  
unclear points in the report  
+ short, apt and clear, well  
prioritized, all time used


NOTES:  
dust dan  
margu

Exp. -  
• primär  
• sekundäre  
→ an konkrete

Erwerbung? → Bole may?

• reichtest → reichte  
 • teuere → teuer  
 • grat → grat

• Typy podatku


 + part  
 of wave =  
 the wave

• leave  
 • Thruout a scatter  
 → vics  
 • Thruout a scatter  
 → vics

OPPOSITION (SPEECH)				
understanding of presentation	relevant topics addressed	own opinions presented	prioritisation	time management
almost nothing	no or irrelevant	too few	some	poor
some main points	few	some	reasonable	fair
main points	some	some correct	reasonable	efficient
all relevant points	many	many correct	fair	all time used +
practically all points	practically all	+ improvement suggestions	very good	

DISCUSSION WITH REPORTER			
relevant	own opinions	opponent's conduct of	overall efficient
scientific topics	presented	the discussion	very good
almost no	too few	poor	some aspects fine
few	some	some aspects fine	good
some	some correct	good	some aspects efficient
good	many correct	some aspects efficient	fair
new crucial point(s)	+ improvement suggestions	overall efficient	very good

ANSWERS TO JURY and REVIEWER'S QUESTIONS

concise and correct or	.....	.....
no questions asked	.....	.....
some incorrect,	.....	.....
inconclusive or too long	.....	.....
deeply incorrect or shows	.....	.....
deep misconceptions	.....	.....

## REVIEWER

Start from 1 and add/subtract

$$\boxed{2} + \boxed{1}$$
$$0 \neq 1 + i + i^2 + i^3$$

## QUESTIONS ASKED

2. **2.5**

- 0 too few, mostly irrelevant
- 1 relevant, meant to clarify unclear points
- 2 + suitably allotted to Rep & Opp, most time used
- 3 + short, apt and clear, well prioritized, time managed efficiently

• Africa drinks/coke to waste

- how many times is it
- slide by

- Office 7 → daylong visit
- 10 am even till 11 tea program
- Dasabara Pakistan

Please, suitably adjust your grades taking into regard the [1,10] range.



# SCORESHEET

## REPORTER

Start from 1 and add/subtract

fight (round no.) 1

stage: 2

room: 102

problem no.: 17

Juror's name & signature: KAVICKY

reporter: 1.56

opponent: SPURBA ROVA

reviewer: POCTOVA

## REPORT

	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	unclear, chaotic
1	some	some	some	some	review of sources, cited	partly	partly clear
2	fair	fair	fair	not well fitting	some own input	average	average
3	good	good	well performed, sufficient number	deviations qualitatively analysed	+ some interesting results	some aspects above average	some parts well done
4	detailed	quite detailed, correct	+ results explained	+ theory limits explained, conclusive	considerable experimental or theoretical	interesting solution	overall clear, demonstrative
5	demonstrative	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated

## DISCUSSION WITH OPPONENT

	relevant arguments/responses	reporter's conduct at the discussion
0	too few	poor
1	some	some aspects fine
2	many	good
3	+ data/theory convincingly supported	some aspects efficient
4	proved deep understanding	overall efficient

## ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS

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

NOTES: Crucial points:

Why?  
Proposition → analysis  
RCC positions?

Def. of problem → only when the wave is seen

video of measurement → hand?

speed of wave?  
→ constant  
→ Ans dependence?

Sticker engine ...

290 FPS?  
→ track of prob.

- 500 divisions down score  
→ 100

## OPPONENT

Start from 1 and add/subtract

$$1 + 0.5 + 1 + 1.5 - 0 = 4$$

## QUESTIONS ASKED

- 0 too few, mostly irrelevant
- 1 relevant, aimed at resolving unclear points in the report
- 2 + short, apt and clear, well prioritized, all time used

## OPPOSITION (SPEECH)

	understanding of presentation	relevant topics addressed	own opinions presented	prioritisation	time management
0	almost nothing	no or irrelevant	too few	no	poor
1	some main points	few	some	some	reasonable
2	main points	some	some correct	reasonable	fair
3	all relevant points	many	many correct	fair	efficient
4	practically all points	practically all	+ improvement suggestions	very good	+ all time used

## DISCUSSION WITH REPORTER

	relevant scientific topics	own opinions presented	opponent's conduct of the discussion	prioritisation
0	almost no	too few	poor	no
1	few	some	some aspects fine	some
2	some	some correct	good	reasonable
3	good	many correct	some aspects efficient	fair
4	new crucial point(s)	+ improvement suggestions	overall efficient	very good

## ANSWERS TO JURY and REVIEWER'S QUESTIONS

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

NOTES:

No key questions: C

→ exp. → fine but analysis?  
→ what he has to do ...

→ probability of measurement

→ principle

→ makes it less likely

## REVIEWER

Start from 1 and add/subtract

$$1 + 2.5 + 2 + 1.5 - 0 - 0 = 9$$

## QUESTIONS ASKED

- 0 too few, mostly irrelevant
- 1 relevant, meant to clarify unclear points
- 2 + suitably allotted to Rep & Opp, most time used
- 3 + short, apt and clear, well prioritized, time managed efficiently

## REVIEW OF REPORT

	report evaluation & understanding	pros & cons	prioritisation
0	poor/wrong	irrelevant	no
1	partial	partially relevant	some
2	good	mostly adequate	reasonable
3	detailed, complex	fully adequate	good

## REVIEW OF OPPOSITION

	speech evaluation	pros & cons	prioritisation
0	poor/wrong	irrelevant	no
1	too short/long	partially relevant	some
2	informative, apt	mostly adequate	reasonable
3	condensed & accurate	fully adequate	good

## DISCUSSION ANALYSIS

	discussion evaluation	correct own opinions
0	almost no	too few
1	too short/long	some
2	relevant parts	many
3	accurate, conclusive	fully adequate

## MISSED POINTS POINTED OUT

- 0 irrelevant
- 1 none
- 2 relevant, constructive

## ANSWERS TO JURY QUESTIONS

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

NOTES:

Error low  
Abby is the speed of light.  
→ dep. on orientation

→ misinterpretation?



## SCORESHEET

fight (round no.): 1 stage: 2 room: 102 problem no.: 17 Juror's name & signature: JAROSLAV TÓBIK

reporter: ISG PETRUS opponent: ŠROBÁŘOVA LASCAK reviewer: POŠTOVÁ DOBOS

### REPORTER

Start from 1 and add/subtract

$$1 + 2.8 + 1 - 0 = 5$$

### REPORT

	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	unclear, chaotic
1	some	some	some	some	review of sources, cited	partly	partly clear
2	fair	fair	fair	not well fitting	some own input	average	average
3	good	good	well performed, sufficient number	deviations qualitatively analysed	+ some interesting results	some aspects above average	some parts well done
4	detailed demonstrative	quite detailed, correct	+ results explained errors analysed	+ theory limits explained, conclusive	considerable experimental or theoretical	interesting solution	overall clear, demonstrative
5	deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated

### DISCUSSION WITH OPPONENT

	relevant arguments/responses	reporter's conduct at the discussion
0	too few	poor
1	some	some aspects fine
2	many	good
3	+ data/theory convincingly supported	some aspects efficient
4	proved deep understanding	overall efficient

### ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS

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

### NOTES:

Experiment na E - veľký rozdiel teórie a meranie, veľké členenie? - prečo je optický pohyb irelevantný? Čo merali na počítači (čo je y?)

### OPPONENT

Start from 1 and add/subtract

$$1 + 0.8 + 1.8 + 1 - 0.2 = 4$$

### QUESTIONS ASKED

- 0 too few, mostly irrelevant
- 1 relevant, aimed at resolving unclear points in the report
- 2 + short, apt and clear, well prioritized, all time used

### OPPOSITION (SPEECH)

	understanding of presentation	relevant topics addressed	own opinions presented	prioritisation	time management
0	almost nothing	no or irrelevant	too few	no	poor
1	some main points	few	some	some	reasonable
2	main points	some	some correct	reasonable	fair
3	all relevant points	many	many correct	fair	efficient
4	practically all points	practically all	+ improvement suggestions	very good	+ all time used

### DISCUSSION WITH REPORTER

	relevant scientific topics	own opinions presented	opponent's conduct of the discussion	prioritisation
0	almost no	too few	poor	no
1	few	some	some aspects fine	some
2	some	some correct	good	reasonable
3	good	many correct	some aspects efficient	fair
4	new crucial point(s)	+ improvement suggestions	overall efficient	very good

### ANSWERS TO JURY and REVIEWER'S QUESTIONS

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

### NOTES:

Povech - ako ovplyvňuje pohyb Robry? Nebral to do úvahy pri diskusii. Tak isto treba spomenúť ale ako niviť s javom?

### REVIEWER

Start from 1 and add/subtract

$$1 + 1.5 + 2.2 + 2 + 2 - 0.5 - 0 = 9$$

### QUESTIONS ASKED

- 0 too few, mostly irrelevant
- 1 relevant, meant to clarify unclear points
- 2 + suitably allotted to Rep & Opp, most time used
- 3 + short, apt and clear, well prioritized, time managed efficiently

### REVIEW OF REPORT

	report evaluation & understanding	pros & cons	prioritisation
0	poor/wrong	irrelevant	no
1	partial	partially relevant	some
2	good	mostly adequate	reasonable
3	detailed, complex	fully adequate	good

### REVIEW OF OPPOSITION

	speech evaluation	pros & cons	prioritisation
0	poor/wrong	irrelevant	no
1	too short/long	partially relevant	some
2	informative, apt	mostly adequate	reasonable
3	condensed & accurate	fully adequate	good

### DISCUSSION ANALYSIS

	discussion evaluation	correct own opinions
0	almost no	too few
1	too short/long	some
2	relevant parts	many
3	accurate, conclusive	fully adequate

### MISSED POINTS POINTED OUT

- 1 irrelevant
- 0 none
- 1 relevant, constructive

### ANSWERS TO JURY QUESTIONS

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

### NOTES:

Horečne spomenúť že v hornom bode nie je kin. energia nulová, lebo kadacia!



## SCORESHEET

### REPORTER

Start from 1 and add/subtract

$$1 + 4.5 + 1.5 - 0 = 7$$

fight (round no.): 1 stage: 2 room: 102 problem no.: 17

Juror's name & signature: ADAMUSCIN

reporter: PETRUS

opponent: CASCAK

reviewer: DOBOS

REPORT	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication	DISCUSSION WITH OPPONENT	ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	unclear, chaotic	relevant arguments/responses	reporter's conduct at the discussion
1	some	some	some	some	review of sources, cited	partly	partly clear	too few	poor
2	fair	fair	fair	not well fitting	some own input	average	average	some	some aspects fine
3	good	good	well performed, sufficient number	deviations qualitatively analysed	+ some interesting results	some aspects above average	some parts well done	many	good
4	detailed demonstrative	quite detailed, correct	+ results explained errors analysed	+ theory limits explained, conclusive	considerable experimental or theoretical	interesting solution	overall clear, demonstrative	+ data/theory convincingly supported	some aspects efficient
5	deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated	proved deep understanding	overall efficient
6									
7									

NOTES:

### OPPONENT

Start from 1 and add/subtract

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

QUESTIONS ASKED	OPPOSITION (SPEECH)	DISCUSSION WITH REPORTER	ANSWERS TO JURY and REVIEWER'S QUESTIONS
0 too few, mostly irrelevant	understanding of presentation	relevant scientific topics	own opinions presented
1 relevant, aimed at resolving unclear points in the report	almost nothing	almost no	too few
2 + short, apt and clear, well prioritized, all time used	some main points	few	some
	main points	some	some correct
	all relevant points	good	many correct
	practically all points	new crucial point(s)	+ improvement suggestions
			very good
			all time used

NOTES:

### REVIEWER

Start from 1 and add/subtract

$$1 + 1 + 2.5 + 2.5 + 1.5 \pm \square - \square = 8$$

QUESTIONS ASKED	REVIEW OF REPORT	REVIEW OF OPPOSITION	DISCUSSION ANALYSIS	MISSED POINTS POINTED OUT	ANSWERS TO JURY QUESTIONS
0 too few, mostly irrelevant	report evaluation & understanding	speech evaluation	discussion evaluation	correct own opinions	concise and correct or no questions asked
1 relevant, meant to clarify unclear points	poor/wrong	poor/wrong	almost no	too few	some incorrect, inconclusive or too long
2 + suitably allotted to Rep & Opp, most time used	partial	too short/long	too short/long	some	deeply incorrect or show deep misconceptions
3 + short, apt and clear, well prioritized, time managed efficiently	good	informative, apt	relevant parts	many	
	detailed, complex	condensed & accurate	accurate, conclusive	fully adequate	

NOTES:



# SCORESHEET

## REPORTER

Start from 1 and add/subtract

$$1 + 2.5 + 1.5 - 0.5 = 5$$

fight (round no.): 1 stage: 1 room: 102

problem no.: 9

Juror's name & signature: KAVICKY

reporter: GPOŠTOVA/NAČOŠTEJER

opponent: 1.SG (Samuel Hroch)

reviewer: G ŠROBAROVA

REPORT							DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication	relevant arguments/responses	reporter's conduct at the discussion	
almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	unclear, chaotic	too few	poor	0 ..... concise and correct or no questions asked -1 ..... some incorrect, inconclusive or too long -2 ..... deeply incorrect or show deep misconceptions
some	some	some	some	review of sources, cited	partly	partly clear	some	some aspects fine	
fair	fair	fair	not well fitting	some own input	average	average	many	good	
good	good	well performed, sufficient number	deviations qualitatively analysed	+ some interesting results	some aspects above average	some parts well done	+ data/theory convincingly supported	some aspects efficient	
detailed demonstrative	quite detailed, correct	+ results explained errors analysed	+ theory limits explained, conclusive	considerable experimental or theoretical	interesting solution	overall clear, demonstrative	proved deep understanding	overall efficient	
deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated			

NOTES: absorption of  $\text{SO}_2$  into water  
 how was it measured? Linear fit? Beer's law? measured/theory? should be because diff. temp. of source and detector. Wavelengths - change of refractive index, change of thickness? State made in order of complexity?

## OPPONENT

Start from 1 and add/subtract

$$1 + 1.5 + 3.5 + 2 - 0 = 8$$

QUESTIONS ASKED		OPPOSITION (SPEECH)					DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS
		understanding of presentation	relevant topics addressed	own opinions presented	prioritisation	time management	relevant scientific topics	own opinions presented	opponent's conduct of the discussion	prioritisation	
0 ..... too few, mostly irrelevant		almost nothing	no or irrelevant	too few	no	poor	almost no	too few	poor	no	0 ..... concise and correct or no questions asked -1 ..... some incorrect, inconclusive or too long -2 ..... deeply incorrect or show deep misconceptions
1 ..... relevant, aimed at resolving unclear points in the report		some main points	few	some	some	reasonable	few	some	some aspects fine	some	
2 ..... + short, apt and clear, well prioritized, all time used		main points	some	some correct	reasonable	fair	some	some correct	good	reasonable	
		all relevant points	many	many correct	fair	efficient	good	many correct	some aspects efficient	fair	
		practically all points	practically all	+ improvement suggestions	very good	+ all time used	new crucial point(s)	+ improvement suggestions	overall efficient	very good	

NOTES: obcovana v obvodu? teoreticky kapacita -> nezmenná? v rozkladu by bylo V? dle knihy -> probobne? tep. vodivost -> uveďte X? jaké je obvod?

## REVIEWER

Start from 1 and add/subtract

$$1 + 0.5 + 1 + 0.5 + 0.5 - 0.5 - 0 = 3$$

QUESTIONS ASKED		REVIEW OF REPORT			REVIEW OF OPPOSITION			DISCUSSION ANALYSIS		MISSED POINTS POINTED OUT	ANSWERS TO JURY QUESTIONS
		report evaluation & understanding	pros & cons	prioritisation	speech evaluation	pros & cons	prioritisation	discussion evaluation	correct own opinions		
0 ..... too few, mostly irrelevant		poor/wrong	irrelevant	no	poor/wrong	irrelevant	no	almost no	too few	-1 ..... irrelevant	0 ..... concise and correct or no questions asked -1 ..... some incorrect, inconclusive or too long -2 ..... deeply incorrect or show deep misconceptions
1 ..... relevant, meant to clarify unclear points		partial	partially relevant	some	too short/long	partially relevant	some	- too short/long	some	0 ..... none	
2 ..... + suitably allotted to Rep & Opp, most time used		good	mostly adequate	reasonable	informative, apt	mostly adequate	reasonable	relevant parts	many	-1 ..... relevant, constructive	
3 ..... + short, apt and clear, well prioritized, time managed efficiently		detailed, complex	fully adequate	good	condensed & accurate	fully adequate	good	accurate, conclusive	fully adequate	-2 ..... deeply incorrect or show deep misconceptions	

NOTES: Vlna se vlní? vlnová délka? -> vlnová rychlost? -> teplota? -> vlnová rychlost? -> teplota?

Please, suitably adjust your grades taking into regard the [1,10] range.



# SCORESHEET

fight (round no.): 1 stage: 1 room: 102

problem no.: 9

Juror's name & signature:

reporter: KAROS MEŠTER  
POŠTOVA

opponent: SAMUEL JAN PLEŠNÍK  
1. SG

reviewer: ŠROBÁŘOVÁ

REPORTER Start from 1 and add/subtract

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

REPORT	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	unclear, chaotic
1	some	some	some	some	review of sources, cited	partly	partly clear
2	fair	fair	fair	not well fitting	some own input	average	average
3	good	good	well performed, sufficient number	deviations qualitatively analysed	+ some interesting results	some aspects above average	some parts well done
4	detailed demonstrative	quite detailed, correct	+ results explained errors analysed	+ theory limits explained, conclusive	considerable experimental or theoretical	interesting solution	overall clear, demonstrative
5	deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated

DISCUSSION WITH OPPONENT	relevant arguments/responses	reporter's conduct at the discussion
0	too few	poor
1	some	some aspects fine
2	many	good
3	+ data/theory convincingly supported	some aspects efficient
4	proved deep understanding	overall efficient

ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS

0: concise and correct or no questions asked  
-0.5: some incorrect, inconclusive or too long  
-1: deeply incorrect or show deep misconceptions

NOTES:

KEYWORDS: - this layer - thermal lens - explain

• % → which d ↓  
• capacity | ↓ v comes from

Slide 7: why? how important why interested

Slide 14: What is D<sub>2</sub> and D<sub>1</sub>? Beam waist

Exp Slide 25: not static? What changes it? Slide 26: What causes things?

Slide 26: How did you measure focal length?

interesting questions: effect of glass in container

• Effect of glass in container

• Effect of glass in container

• Effect of glass in container

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OPPONENT Start from 1 and add/subtract

$$1 + 2 + 4 + 1 - 0 = 8$$

QUESTIONS ASKED	understanding of presentation	relevant topics addressed	own opinions presented	prioritisation	time management
0	too few, mostly irrelevant	almost nothing	no or irrelevant	too few	no
1	relevant, aimed at resolving unclear points in the report	some main points	few	some	reasonable
2	+ short, apt and clear, well prioritized, all time used	main points	some	some correct	reasonable
3		all relevant points	many	many correct	fair
4		practically all points	practically all	+ improvement suggestions	efficient

NOTES:

absorbing coefficient

• medium thermal capacity

• gaussian laser properties

• also as Gaussian propagation laser

• resonance

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OPPOSITION (SPEECH)

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ANSWERS TO JURY and REVIEWER'S QUESTIONS

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REVIEWER Start from 1 and add/subtract

$$1 + 0.5 + 0.5 + 0.5 + 0.5 \pm 1 - 0 = 2$$

QUESTIONS ASKED	report evaluation & understanding	pros & cons	prioritisation
0	too few, mostly irrelevant	irrelevant	no
0.5	relevant, meant to clarify unclear points	partially relevant	some
1	+ suitably allotted to Rep & Opp, most time used	mostly adequate	reasonable
2	+ short, apt and clear, well prioritized, time managed efficiently	detailed, complex	fully adequate

NOTES:

• vlnová laser

• Tešná 21

• Atle parameters

• Atle parameters

• Atle parameters

• Atle parameters

REVIEW OF REPORT

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REVIEW OF OPPOSITION

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DISCUSSION ANALYSIS

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MISSED POINTS POINTED OUT

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ANSWERS TO JURY QUESTIONS

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ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS

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ANSWERS TO JURY and REVIEWER'S QUESTIONS

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DISCUSSION WITH OPPONENT

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## SCORESHEET

fight (round no.): 1 stage: 1 room: 102 problem no.: 9 Juror's name & signature: JAROSLAV TOBIK JECIK  
reporter: POŠTOVA' M. MEŠTER opponent: ISG S. PLEŠNÍK reviewer: ŠROBÁŘOVA, HALÁŠ

### REPORTER

Start from 1 and add/subtract

$$1 + 5 + 1.5 - 0.2 = 7$$

### REPORT

	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	unclear, chaotic
1	some	some	some	some	review of sources, cited	partly	partly clear
2	fair	fair	fair	not well fitting	some own input	average	average
3							
4	good	• good	• well performed, sufficient number	• deviations qualitatively analysed	+ some interesting results	• some aspects above average	• some parts well done
5	detailed demonstrative	quite detailed, correct	+ results explained errors analysed	+ theory limits explained, conclusive	considerable experimental or theoretical	interesting solution	• overall clear, demonstrative
6	deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated
7							

### DISCUSSION WITH OPPONENT

	relevant arguments/responses	reporter's conduct at the discussion
0	too few	poor
1	some	some aspects fine
2	many	• good
3	+ data/theory convincingly supported	some aspects efficient
4	proved deep understanding	overall efficient

### ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS

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

NOTES:

### OPPONENT

Start from 1 and add/subtract

$$1 + 1.5 + 3 + 2.5 - 0 = 8$$

### QUESTIONS ASKED

- 0 ..... too few, mostly irrelevant  
1 ..... relevant, aimed at resolving unclear points in the report  
2 ..... + short, apt and clear, well prioritized, all time used

### OPPOSITION (SPEECH)

	understanding of presentation	relevant topics addressed	own opinions presented	prioritisation	time management
0	almost nothing	no or irrelevant	too few	no	poor
1	some main points	few	some	some	reasonable
2	main points	some	some correct	reasonable	fair
3	• all relevant points	• many	• many correct	fair	efficient
4	practically all points	practically all	+ improvement suggestions	• very good	+ all time used

### DISCUSSION WITH REPORTER

	relevant scientific topics	own opinions presented	opponent's conduct of the discussion	prioritisation
0	almost no	too few	poor	no
1	few	some	some aspects fine	some
2	some	some correct	• good	reasonable
3	• good	• many correct	some aspects efficient	• fair
4	new crucial point(s)	+ improvement suggestions	overall efficient	very good

### ANSWERS TO JURY and REVIEWER'S QUESTIONS

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

NOTES:

### REVIEWER

Start from 1 and add/subtract

$$1 + 1.2 + 2 + 2.2 + 1 \pm 0 - 0 = 7$$

### QUESTIONS ASKED

- 0 ..... too few, mostly irrelevant  
1 ..... relevant, meant to clarify unclear points  
2 ..... + suitably allotted to Rep & Opp, most time used  
3 ..... + short, apt and clear, well prioritized, time managed efficiently

### REVIEW OF REPORT

	report evaluation & understanding	pros & cons	prioritisation
0	poor/wrong	irrelevant	no
1	partial	• partially relevant	some
2	• good	mostly adequate	reasonable
3	detailed, complex	fully adequate	good

### REVIEW OF OPPOSITION

	speech evaluation	pros & cons	prioritisation
0	poor/wrong	irrelevant	no
1	too short/long	partially relevant	some
2	informative, apt	mostly adequate	reasonable
3	condensed & accurate	• fully adequate	good

### DISCUSSION ANALYSIS

	discussion evaluation	correct own opinions
0	almost no	too few
1	too short/long	• some
2	• relevant parts	many
3	accurate, conclusive	fully adequate

### MISSED POINTS POINTED OUT

- 1 ..... irrelevant  
0 ..... none  
1 ..... relevant, constructive

### ANSWERS TO JURY QUESTIONS

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

NOTES:

Please, suitably adjust your grades taking into regard the [1,10] range.



## SCORESHEET

### REPORTER

Start from 1 and add/subtract

$$1 + 4 + 1 - 0 = 6$$

fight (round no.): 1 stage: 1 room: 102 problem no.: 9 Juror's name & signature: ADAMUSCIN

reporter: MESTER

opponent: PLESNIK

reviewer: MESTER HACA'SZ

REPORT							DISCUSSION WITH OPPONENT		ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS
phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication	relevant arguments/responses	reporter's conduct at the discussion	
0 ..... almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	unclear, chaotic	0 ..... too few	poor	0 ..... concise and correct or no questions asked -1 ..... some incorrect, inconclusive or too long -2 ..... deeply incorrect or show deep misconceptions
1 ..... some	some	some	some	review of sources, cited	partly	partly clear	1 ..... some	some aspects fine	
2 ..... fair	fair	fair	not well fitting	some own input	average	average	2 ..... many	good	
3 ..... good	good	well performed, sufficient number	deviations	+ some interesting results	some aspects above average	some parts well done	3 ..... + data/theory convincingly supported	some aspects efficient	
4 ..... detailed demonstrative	quite detailed, correct	+ results explained errors analysed	qualitatively analysed	considerable experimental or theoretical	interesting solution	overall clear, demonstrative	4 ..... proved deep understanding	overall efficient	
5 ..... deep and comprehensible, shows physical insight	detailed, complex, completely testable	+ reproducible, convincing analysis	+ theory limits explained, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated			

NOTES:

### OPPONENT

Start from 1 and add/subtract

$$1 + 1 + 3 + 2 - 0 = 7$$

QUESTIONS ASKED		OPPOSITION (SPEECH)					DISCUSSION WITH REPORTER				ANSWERS TO JURY and REVIEWER'S QUESTIONS
		understanding of presentation	relevant topics addressed	own opinions presented	prioritisation	time management	relevant scientific topics	own opinions presented	opponent's conduct of the discussion	prioritisation	
0 ..... too few, mostly irrelevant		almost nothing	no or irrelevant	too few	no	poor	0 ..... almost no	too few	poor	no	0 ..... concise and correct or no questions asked -1 ..... some incorrect, inconclusive or too long -2 ..... deeply incorrect or show deep misconceptions
1 ..... relevant, aimed at resolving unclear points in the report		some main points	few	some	some	reasonable	1 ..... few	some	some aspects fine	some	
2 ..... + short, apt and clear, well prioritized, all time used		main points	some	some correct	reasonable	fair	2 ..... some	some correct	good	reasonable	
		all relevant points	many	many correct	fair	efficient	3 ..... good	many correct	some aspects efficient	fair	
		practically all points	practically all	+ improvement suggestions	very good	+ all time used	4 ..... new crucial point(s)	+ improvement suggestions	overall efficient	very good	

NOTES:

### REVIEWER

Start from 1 and add/subtract

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

QUESTIONS ASKED		REVIEW OF REPORT			REVIEW OF OPPOSITION			DISCUSSION ANALYSIS		MISSED POINTS POINTED OUT	ANSWERS TO JURY QUESTIONS
		report evaluation & understanding	pros & cons	prioritisation	speech evaluation	pros & cons	prioritisation	discussion evaluation	correct own opinions		
0 ..... too few, mostly irrelevant		poor/wrong	irrelevant	no	0 ..... poor/wrong	irrelevant	no	0 ..... almost no	too few	-1 ..... irrelevant	0 ..... concise and correct or no questions asked -1 ..... some incorrect, inconclusive or too long -2 ..... deeply incorrect or show deep misconceptions
1 ..... relevant, meant to clarify unclear points		partial	partially relevant	some	1 ..... too short/long	partially relevant	some	1 ..... too short/long	some	0 ..... none	
2 ..... + suitably allotted to Rep & Opp, most time used		good	mostly adequate	reasonable	2 ..... informative, apt	mostly adequate	reasonable	2 ..... relevant parts	many	1 ..... relevant, constructive	
3 ..... + short, apt and clear, well prioritized, time managed efficiently		detailed, complex	fully adequate	good	3 ..... condensed & accurate	fully adequate	good	3 ..... accurate, conclusive	fully adequate		

NOTES:



## SCORESHEET

fight (round no.): 1 stage: 1 room: 102 problem no.: 9

Juror's name & signature: P. BICU

reporter: TAROS NESTER

opponent: SATKO

reviewer: HUGO HALASZ

### REPORTER

Start from 1 and add/subtract

$$1 + 2.5 + 1.5 - 1 = 4$$

### REPORT

	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfilment	science communication
0	almost no	almost no	too few	no/ almost no	others' data, incorrectly cited	misunderstood	unclear, chaotic
1	some	some	some	some	review of sources, cited	partly	partly clear
2	fair	fair	fair	not well fitting	some own input	average	average
3	good	good	well performed, sufficient number	deviations qualitatively analysed	+ some interesting results	some aspects above average	some parts well done
4	detailed	quite detailed, correct	+ results explained	+ theory limits explained, conclusive	considerable experimental or theoretical	interesting solution	overall clear, demonstrative
5	demonstrative	detailed, complex, completely testable	errors analysed	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated
6	deep and comprehensible, shows physical insight		+ reproducible, convincing analysis				
7							

### DISCUSSION WITH OPPONENT

	relevant arguments/responses	reporter's conduct at the discussion
0	too few	poor
1	some	some aspects fine
2	many	good
3	+ data/theory convincingly supported	some aspects efficient
4	proved deep understanding	overall efficient

### ANSWERS TO JURY, OPPONENT, and REVIEWER'S QUESTIONS

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

NOTES:

### OPPONENT

Start from 1 and add/subtract

$$1 + 0.5 + 1.5 + 1 - 0 = 4$$

### QUESTIONS ASKED

- 0 too few, mostly irrelevant
- 1 relevant, aimed at resolving unclear points in the report
- 2 + short, apt and clear, well prioritized, all time used

### OPPOSITION (SPEECH)

	understanding of presentation	relevant topics addressed	own opinions presented	prioritisation	time management
0	almost nothing	no or irrelevant	too few	no	poor
1	some main points	few	some	some	reasonable
2	main points	some	some correct	reasonable	fair
3	all relevant points	many	many correct	fair	efficient
4	practically all points	practically all	+ improvement suggestions	very good	+ all time used

### DISCUSSION WITH REPORTER

	relevant scientific topics	own opinions presented	opponent's conduct of the discussion	prioritisation
0	almost no	too few	poor	no
1	few	some	some aspects fine	some
2	some	some correct	good	reasonable
3	good	many correct	some aspects efficient	fair
4	new crucial point(s)	+ improvement suggestions	overall efficient	very good

### ANSWERS TO JURY and REVIEWER'S QUESTIONS

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

NOTES: NIE NA PODSTATU

+ CHYBA TEORIA

### REVIEWER

Start from 1 and add/subtract

$$1 + 0.5 + 0.5 + 0.5 + 0.5 - 0 = 3$$

### QUESTIONS ASKED

- 0 too few, mostly irrelevant
- 1 relevant, meant to clarify unclear points
- 2 + suitably allotted to Rep & Opp, most time used
- 3 + short, apt and clear, well prioritized, time managed efficiently

### REVIEW OF REPORT

	report evaluation & understanding	pros & cons	prioritisation
0	poor/wrong	irrelevant	no
1	partial	partially relevant	some
2	good	mostly adequate	reasonable
3	detailed, complex	fully adequate	good

### REVIEW OF OPPOSITION

	speech evaluation	pros & cons	prioritisation
0	poor/wrong	irrelevant	no
1	too short/long	partially relevant	some
2	informative, apt	mostly adequate	reasonable
3	condensed & accurate	fully adequate	good

### DISCUSSION ANALYSIS

	discussion evaluation	correct own opinions
0	almost no	too few
1	too short/long	some
2	relevant parts	many
3	accurate, conclusive	fully adequate

### MISSED POINTS POINTED OUT

- 0 irrelevant
- 1 none
- 2 relevant, constructive

### ANSWERS TO JURY QUESTIONS

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

NOTES:

Dobro teória?

konka