

# REPORTER

Start from 1 and add/subtract



# SCORESHEET

Stage: 1 Fight 2 Z, Problem: 10

Poland: NUCHA

signature

Hruter Vedeu

Plesch, Martin

Gymnasium Freistadt:

Germany Rosenheim: KIRCHHOF

## REPORT

	phenomenon explanation	theory/model	relevant experiments	comparison between theory and experiment	own contribution	task fulfillment	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	deep and comprehensible, shows physical insight	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:

## OPPONENT

Start from 1 and add/subtract

$$1 + 1 + 0.5 + 0.5 - \square = 3$$

## 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

$$1 + 0.75 + 2 + 0 + 0 + 0.25 - \square = 4$$

## 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
- 2 --- 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:

## REPORTER

Start from 1 and add/subtract



## SCORESHEET

Stage: 1 Fight 2 Z, Problem:

Poland: *Rev.*

sign

Beck, Anatol

Gymnasium Freistadt: *OP.*Germany Rosenheim: *Rev.*

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 fulfillment	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 — <input checked="" type="checkbox"/> concise and correct or no questions asked 1 — <input checked="" type="checkbox"/> some incorrect, inconclusive or too long 2 — <input checked="" type="checkbox"/> deeply incorrect or show deep misconceptions
1 — some	some	some	some <input checked="" type="checkbox"/>	review of sources, cited	partly	partly clear	1 — some <input checked="" type="checkbox"/>	some aspects fine <input checked="" type="checkbox"/>	
2 — fair	fair <input checked="" type="checkbox"/>	fair	not well fitting	some own input	average	average	2 — many <input checked="" type="checkbox"/>	good	
3 — good	good	well performed, sufficient number <input checked="" type="checkbox"/>	deviations qualitatively analysed	+ some interesting results	some aspects above average	some parts well done	3 — + data/theory convincingly supported	some aspects efficient	
4 — detailed demonstrative <input checked="" type="checkbox"/>	quite detailed, correct	+ results explained errors analysed	+ theory limits explained, conclusive	considerable experimental or theoretical <input checked="" type="checkbox"/>	interesting solution <input checked="" type="checkbox"/>	overall clear, demonstrative <input checked="" type="checkbox"/>	4 — 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:

*show fitting analysis of your theory to the real results! or at least an estimation*

*(2) many different materials shapes :> but too little about the external perturbations :c*

*you did not really discuss with your opponent! But you did agree with jury*

## OPPONENT

Start from 1 and add/subtract

$$1 + 0,5 + 2,5 + 1 - 1 = 4$$

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 — <input checked="" type="checkbox"/> too few, mostly irrelevant		0 — almost nothing	no or irrelevant	too few	no	poor	0 — almost no	too few <input checked="" type="checkbox"/>	poor	no	0 — <input checked="" type="checkbox"/> concise and correct or no questions asked 1 — <input checked="" type="checkbox"/> some incorrect, inconclusive or too long 2 — <input checked="" type="checkbox"/> deeply incorrect or show deep misconceptions
1 — <input checked="" type="checkbox"/> relevant, aimed at resolving unclear points in the report		1 — some main points	few	some <input checked="" type="checkbox"/>	some	reasonable	1 — few	some	some aspects fine <input checked="" type="checkbox"/>	some <input checked="" type="checkbox"/>	
2 — + short, apt and clear, well prioritized, all time used		2 — main points <input checked="" type="checkbox"/>	some	some correct	reasonable <input checked="" type="checkbox"/>	fair <input checked="" type="checkbox"/>	2 — some <input checked="" type="checkbox"/>	some correct	good	reasonable	
		3 — all relevant points	many <input checked="" type="checkbox"/>	many correct	fair	efficient	3 — good	many correct	some aspects efficient	fair	
		4 — practically all points	practically all	+ improvement suggestions	very good	+ all time used	4 — new crucial point(s)	+ improvement suggestions	overall efficient	very good	

NOTES:

*you did not really discuss with the reporter*

## REVIEWER

Start from 1 and add/subtract

$$1 + 0,5 + 2 + 0 + 1,5 + 0 - 1 = 4$$

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 — poor/wrong	irrelevant	no	0 — <input checked="" type="checkbox"/> poor/wrong	irrelevant	no	0 — almost no	too few	-1 — irrelevant	0 — concise and correct or no questions asked 1 — <input checked="" type="checkbox"/> some incorrect, inconclusive or too long 2 — <input checked="" type="checkbox"/> deeply incorrect or show deep misconceptions
1 — <input checked="" type="checkbox"/> relevant, meant to clarify unclear points		1 — partial	partially relevant	some	1 — too short/long	partially relevant	some	1 — too short/long	some <input checked="" type="checkbox"/>	0 — <input checked="" type="checkbox"/> none	
2 — + suitably allotted to Rep & Opp, most time used		2 — good <input checked="" type="checkbox"/>	mostly adequate <input checked="" type="checkbox"/>	reasonable <input checked="" type="checkbox"/>	2 — informative, apt	mostly adequate	reasonable	2 — relevant parts	many	1 — relevant, constructive	
3 — + short, apt and clear, well prioritized, time managed efficiently		3 — detailed, complex	fully adequate	good	3 — condensed & accurate	fully adequate	good	3 — accurate, conclusive <input checked="" type="checkbox"/>	fully adequate		

NOTES:



# REPORTER

Start from 1 and add/subtract



# SCORESHEET

Stage: 1 Fight 2 Z, Problem:

sign

*Uner*

Korner, Marianne

Poland: *Rep*

Gymnasium Freistadt: *OP*

Germany Rosenheim: *Rev*

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 qualitatively analysed	+ 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	+ theory limits explained, conclusive	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	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated			

NOTES:

# OPPONENT

Start from 1 and add/subtract

$$1 + 0 + 2 + 1 - 10 = 4$$

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 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	1 some main points	few	some	some	reasonable	1 few	some	some aspects fine	some	
2	+ short, apt and clear, well prioritized, all time used	2 main points	some	some correct	reasonable	fair	2 some	some correct	good	reasonable	
		3 all relevant points	many	many correct	fair	efficient	3 good	many correct	some aspects efficient	fair	
		4 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

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

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 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	+ suitably allotted to Rep & Opp, most time used	1 partial	partially relevant	some	1 too short/long	partially relevant	some	1 too short/long	some	0 none	
2	+ short, apt and clear, well prioritized, time managed efficiently	2 good	mostly adequate	reasonable	2 informative, apt	mostly adequate	reasonable	2 relevant parts	many	1 relevant, constructive	
		3 detailed, complex	fully adequate	good	3 condensed & accurate	fully adequate	good	3 accurate, conclusive	fully adequate		

NOTES:

# REPORTER

Start from 1 and add/subtract

$$1 + 2.5 + 0.5 - 0 = 4$$



# SCORESHEET

Stage: 1 Fight 2 Z, Problem: 10

sign

*[Signature]*

Mnevets, Daniil

Poland:

Gymnasium Freistadt:

Germany Rosenheim:

REPORT 2.0-2.5							DISCUSSION WITH OPPONENT 0.5		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 incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1 some	1 some	1 some	1 some	1 review of sources, cited	1 partly	1 partly clear	1 some	1 some aspects fine	
2 fair	2 fair	2 fair	2 not well fitting	2 some own input	2 average	2 average	2 many	2 good	
3 good	3 good	3 well performed, sufficient number	3 deviations qualitatively analysed	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:

# OPPONENT

Start from 1 and add/subtract

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

QUESTIONS ASKED 0-0.5		OPPOSITION (SPEECH) 1					DISCUSSION WITH REPORTER 0.5-0.5				ANSWERS TO JURY and REVIEWER'S QUESTIONS
0	1	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 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
1 + short, apt and clear, well prioritized, all time used		1 some main points	1 few	1 some	1 some	1 reasonable	1 few	1 some	1 some aspects fine	1 some	
		2 main points	2 some	2 some correct	2 reasonable	2 fair	2 good	2 some correct	2 good	2 reasonable	
		3 all relevant points	3 many	3 many correct	3 fair	3 efficient	3 new crucial point(s)	3 + improvement suggestions	3 some aspects efficient	3 fair	
		4 practically all points	4 practically all	4 + improvement suggestions	4 very good	4 + all time used			4 overall efficient	4 very good	

NOTES:

# REVIEWER

Start from 1 and add/subtract

$$1 + 0.5 + 2.0 + 1 + 0.5 - 0.5 - 0.5 = 5$$

QUESTIONS ASKED		REVIEW OF REPORT 2-2.5			REVIEW OF OPPOSITION 0.5-1			DISCUSSION ANALYSIS 0.5-1		MISSED POINTS POINTED OUT 0-0.5	ANSWERS TO JURY QUESTIONS
0	1	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 some incorrect, inconclusive or too long -2 deeply incorrect or show deep misconceptions
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	
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	
		3 detailed, complex	3 fully adequate	3 good	3 condensed & accurate	3 fully adequate	3 good	3 accurate, conclusive	3 fully adequate		

NOTES:



## REPORTER

Start from 1 and add/subtract



## SCORESHEET

Stage: 1 Fight 2 Z, Problem: 10

sign

Pfeleger, Alexander

Poland: *Gepale*Gymnasium Freistadt: *Opp*Germany Rosenheim: *Rev*

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 fulfillment	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	some	some	some	review of sources, cited	partly	partly clear	— some	some aspects fine	— some incorrect, inconclusive or too long
2 — fair	fair	fair	not well fitting	some own input	average	average	1 — many	good	— 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	2 — + data/theory convincingly supported	some aspects efficient	— 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	3 — 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:

## OPPONENT

Start from 1 and add/subtract

$$1 + 95 + 135 + 125 - 95 = 4$$

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 — 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 — relevant, aimed at resolving unclear points in the report		1 — some main points	few	some	some	reasonable	1 — few	some	some aspects fine	some	— some incorrect, inconclusive or too long	
2 — + short, apt and clear, well prioritized, all time used		2 — main points	some	some correct	reasonable	fair	2 — some	some correct	good	reasonable	— deeply incorrect or show deep misconceptions	
		3 — all relevant points	many	many correct	fair	efficient	3 — good	many correct	some aspects efficient	fair		
		4 — 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

$$1 + 95 + 235 + 25 + 135 - 45 = 7$$

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		0 — 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 — relevant, meant to clarify unclear points		1 — partial	partially relevant	some	1 — too short/long	partially relevant	some	— too short/long	some	0 — none	— some incorrect, inconclusive or too long
2 — + suitably allotted to Rep & Opp, most time used		2 — good	mostly adequate	reasonable	2 — informative, apt	mostly adequate	reasonable	1 — relevant parts	many	1 — relevant, constructive	— deeply incorrect or show deep misconceptions
3 — + short, apt and clear, well prioritized, time managed efficiently		3 — detailed, complex	fully adequate	good	3 — condensed & accurate	fully adequate	good	2 — accurate, conclusive	fully adequate		

NOTES:

## REPORTER

Start from 1 and add/subtract

$$1 + 3 + 0 - 0 = 4$$



## SCORESHEET

Stage: 1 Fight 2 Z, Problem: 10

Poland: P. M.

Gymnasium Freistadt: F. Hinterreiter

Germany Rosenheim

Q. Kirchhof

Worm, Paul

## 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:

## OPPONENT

Start from 1 and add/subtract

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

## 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	all relevant points	many	many correct	fair	efficient
3	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	poor
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:

About Binaries left on clock

## REVIEWER

Start from 1 and add/subtract

$$1 + 1.5 + 2 + 1.5 + 0.5 + 0.5 - 0.75 = 5$$

## 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: Brought up aspects that are most likely irrelevant

Criticised



## REPORTER 3

Start from 1 and add/subtract



## SCORESHEET

Stage: 2 Fight 2 Z, Problem:

sign

Plesch, Martin

Gymnasium Freistadt: KAIFERMAX

Germany Rosenheim: ARENITS

Iran:

DAGH + DAI

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 qualitatively analysed	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			
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:

## OPPONENT

Start from 1 and add/subtract

$$1 + 0.75 + 1 + 2.5 - 0.5 = 5$$

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 --- + short, apt and clear, well prioritized, all time used		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 --- all relevant points	2 --- many	2 --- many correct	2 --- fair	2 --- efficient	2 --- some	2 --- some correct	2 --- good	2 --- reasonable	2 --- deeply incorrect or show deep misconceptions	
		3 --- practically all points	3 --- practically all	3 --- + improvement suggestions	3 --- very good	3 --- + all time used	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:

Vetam :-)

Pros fine, cons not that much

## REVIEWER

Start from 1 and add/subtract

$$1 + 1.25 + 1.5 + 1.5 + 1 = 7$$

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	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	-1 --- irrelevant	0 --- concise and correct or no questions asked
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	0 --- none	1 --- some incorrect, inconclusive or too long
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	1 --- 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:

as a phenomenological overview very good, as a validation of your model it lacked some details / (calculations) / fittings of exp + data

## REPORTER

Start from 1 and add/subtract

$$1 + 3,5 + 2 - 0,5 = 6$$



## SCORESHEET

Stage: 2 Fight 2 Z, Problem:

Gymnasium Freistadt: Rep.

Germany Rosenheim: OP.

Iran: Rev.

sign

Isabel Döl

Beck, Anatol

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	<ul style="list-style-type: none"> <li>0 concise and correct or no questions asked</li> <li>-1 some incorrect, inconclusive or too long</li> <li>-2 deeply incorrect or show deep misconceptions</li> </ul>
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 qualitatively analysed	+ 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	+ theory limits explained, conclusive	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	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated			

## NOTES:

how did data fit the model?   
 severe analysis is missing

show the transition from Helmholtz to the standing wave regime with experiments! Explain why a standing wave

please next time

## OPPONENT

Start from 1 and add/subtract

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

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		0 almost nothing	no or irrelevant	too few	no	poor	0 almost no	too few	poor	no	<ul style="list-style-type: none"> <li>0 concise and correct or no questions asked</li> <li>-1 some incorrect, inconclusive or too long</li> <li>-2 deeply incorrect or show deep misconceptions</li> </ul>
1 relevant, aimed at resolving unclear points in the report		1 some main points	few	some	some	reasonable	1 few	some	some aspects fine	some	
2 + short, apt and clear, well prioritized, all time used		2 main points	some	some correct	reasonable	fair	2 some	some correct	good	reasonable	
		3 all relevant points	many	many correct	fair	efficient	3 good	many correct	some aspects efficient	fair	
		4 practically all points	practically all	+ improvement suggestions	very good	+ all time used	4 new crucial point(s)	+ improvement suggestions	overall efficient	very good	

## NOTES:

shared your thoughts, but could not explain why is the resonance frequency irrelevant?

1) good way of discussing  
2) pointed out the importance of the frequency choice with time

## REVIEWER

Start from 1 and add/subtract

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

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		0 poor/wrong	irrelevant	no	0 poor/wrong	irrelevant	no	0 almost no	too few	-1 irrelevant	<ul style="list-style-type: none"> <li>0 concise and correct or no questions asked</li> <li>-1 some incorrect, inconclusive or too long</li> <li>-2 deeply incorrect or show deep misconceptions</li> </ul>
1 relevant, meant to clarify unclear points		1 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		2 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		3 detailed, complex	fully adequate	good	3 condensed & accurate	fully adequate	good	3 accurate, conclusive	fully adequate		

## NOTES:



## REPORTER

Start from 1 and add/subtract



## SCORESHEET

Stage: 2 Fight 2 Z, Problem:

sign

Herw

Korner, Marianne

Gymnasium Freistadt: DEP

Germany Rosenheim: OP

Iran: REV

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 --- <input checked="" type="checkbox"/> concise and correct or no questions asked --- some incorrect, inconclusive or too long -1 --- some incorrect, inconclusive or too long -2 --- deeply incorrect or show deep misconceptions
1 --- some	1 --- some	1 --- some	1 --- some	1 --- review of sources, cited	1 --- partly	1 --- partly clear	1 --- some	1 --- some aspects fine	
2 --- fair	2 --- <input checked="" type="checkbox"/> fair	2 --- <input checked="" type="checkbox"/> fair	2 --- not well fitting	2 --- some own input	2 --- <input checked="" type="checkbox"/> average	2 --- <input checked="" type="checkbox"/> average	2 --- many	2 --- good	
3 --- <input checked="" type="checkbox"/> good	3 --- good	3 --- well performed, sufficient number	3 --- <input checked="" type="checkbox"/> deviations qualitatively analysed	3 --- + some interesting results	3 --- <input checked="" type="checkbox"/> 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 --- <input checked="" type="checkbox"/> considerable experimental or theoretical	4 --- interesting solution	4 --- overall clear, demonstrative	4 --- <input checked="" type="checkbox"/> proved deep understanding	4 --- <input checked="" type="checkbox"/> 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:

## OPPONENT

Start from 1 and add/subtract

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

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 --- some incorrect, inconclusive or too long -1 --- some incorrect, inconclusive or too long -2 --- deeply incorrect or show deep misconceptions
1 --- <input checked="" type="checkbox"/> short, apt and clear, well prioritized, all time used		1 --- some main points	1 --- few	1 --- <input checked="" type="checkbox"/> some	1 --- some	1 --- reasonable	1 --- few	1 --- some	1 --- some aspects fine	1 --- some	
		2 --- main points	2 --- some	2 --- some correct	2 --- reasonable	2 --- fair	2 --- some	2 --- some correct	2 --- good	2 --- reasonable	
		3 --- <input checked="" type="checkbox"/> all relevant points	3 --- <input checked="" type="checkbox"/> many	3 --- many correct	3 --- fair	3 --- efficient	3 --- <input checked="" type="checkbox"/> good	3 --- many correct	3 --- some aspects efficient	3 --- <input checked="" type="checkbox"/> fair	
		4 --- practically all points	4 --- practically all	4 --- + improvement suggestions	4 --- very good	4 --- <input checked="" type="checkbox"/> + all time used	4 --- new crucial point(s)	4 --- <input checked="" type="checkbox"/> + improvement suggestions	4 --- <input checked="" type="checkbox"/> overall efficient	4 --- very good	

NOTES:

## REVIEWER

Start from 1 and add/subtract

$$1 + 0,5 + 2 + 2 + 1 + -0 - -0 = 6$$

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	0 --- <input checked="" type="checkbox"/> 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	-1 --- irrelevant	0 --- <input checked="" type="checkbox"/> concise and correct or no questions asked --- some incorrect, inconclusive or too long -1 --- some incorrect, inconclusive or too long -2 --- deeply incorrect or show deep misconceptions
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	0 --- <input checked="" type="checkbox"/> none	
2 --- + short, apt and clear, well prioritized, time managed efficiently		2 --- good <input checked="" type="checkbox"/>	2 --- mostly adequate <input checked="" type="checkbox"/>	2 --- reasonable <input checked="" type="checkbox"/>	2 --- <input checked="" type="checkbox"/> informative, apt	2 --- mostly adequate <input checked="" type="checkbox"/>	2 --- reasonable <input checked="" type="checkbox"/>	2 --- relevant parts <input checked="" type="checkbox"/>	2 --- many	1 --- relevant, constructive	
		3 --- detailed, complex	3 --- fully adequate	3 --- good	3 --- condensed & accurate	3 --- fully adequate	3 --- good	3 --- accurate, conclusive	3 --- fully adequate		

NOTES:

## REPORTER

Start from 1 and add/subtract



## SCORESHEET

Stage: 2 Fight 2 Z, Problem: 5

sign

Mnevets, Daniil

Gymnasium Freistadt:

Germany Rosenheim:

Iran:

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 qualitatively analysed	+ 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	+ theory limits explained, conclusive	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	well fitting, deviations analysed, conclusive	considerable experimental and theoretical	greater extent than expected	+ complex concepts well communicated			

NOTES:

## OPPONENT

Start from 1 and add/subtract

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

QUESTIONS ASKED 1-1.5		OPPOSITION (SPEECH) 1.5-2					DISCUSSION WITH REPORTER /				ANSWERS TO JURY and REVIEWER'S QUESTIONS
0 --- too few, mostly irrelevant	relevant, aimed at resolving unclear points in the report	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	
1 --- relevant, aimed at resolving unclear points in the report		0 --- 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
2 --- + short, apt and clear, well prioritized, all time used		1 --- some main points	few	some	some	reasonable	1 --- few	some	some aspects fine	some	
		2 --- main points	some	some correct	reasonable	fair	2 --- some	some correct	good	reasonable	
		3 --- all relevant points	many	many correct	fair	efficient	3 --- good	many correct	some aspects efficient	fair	
		4 --- 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

$$1 + 1 + 1.3 + 1 + 0.5 - 0 = 5$$

QUESTIONS ASKED		REVIEW OF REPORT			REVIEW OF OPPOSITION			DISCUSSION ANALYSIS		MISSED POINTS POINTED OUT	ANSWERS TO JURY QUESTIONS
0 --- too few, mostly irrelevant	relevant, meant to clarify unclear points	report evaluation & understanding	pros & cons	prioritisation	speech evaluation	pros & cons	prioritisation	discussion evaluation	correct own opinions		
1 --- + suitably allotted to Rep & Opp, most time used		0 --- 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
2 --- + short, apt and clear, well prioritized, time managed efficiently		1 --- partial	partially relevant	some	1 --- too short/long	partially relevant	some	1 --- too short/long	some	1 --- none	
		2 --- good	mostly adequate	reasonable	2 --- informative, apt	mostly adequate	reasonable	2 --- relevant parts	many	2 --- relevant, constructive	
		3 --- detailed, complex	fully adequate	good	3 --- condensed & accurate	fully adequate	good	3 --- accurate, conclusive	fully adequate		

NOTES:



## REPORTER

Start from 1 and add/subtract



## SCORESHEET

Stage: 2 Fight 2 Z, Problem: 5

sign

Pfleger, Alexander

Gymnasium Freistadt:

Germany Rosenheim:

Iran:

## 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:

## OPPONENT

Start from 1 and add/subtract

$$1 + 4,5 + 2,5 + 2,5 - 4,5 = 6$$

## 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

$$1 + 4,5 + 2 + 2 + 4,5 - 0 - 0 = 6$$

## 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
- 2 — none
- 3 — 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:

## REPORTER

Start from 1 and add/subtract



## SCORESHEET

Stage: 2 Fight 2 Z, Problem: 5

Gymnasium Freistadt: A. Käferböck

Germany Rosenheim: C. Thewitz

Iran: M. Kofhatam

Worm, Paul

## 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:

## OPPONENT

Start from 1 and add/subtract

$$1 + 0.5 + 2.0 + 1.5 - 0 = 5$$

## 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

$$1 + 1.25 + 1.5 + 1.5 + 0.5 - 0.75 - 0 = 5$$

## 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:



# REPORTER

Start from 1 and add/subtract



# SCORESHEET

Stage: 3 Fight 2 Z, Problem:

sign

Plesch, Martin

Germany Rosenheim: Kirchhof Iran: Mohnseni

Poland: Supel

## 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:

## OPPONENT

Start from 1 and add/subtract

$$1 + 0.8 + 1.8 + 2.5 - \square = 6$$

## 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:

OIL -

## REVIEWER

Start from 1 and add/subtract

$$1 + 1.5 + 2 + 1.5 + 1 \pm \square - 1 = 6$$

## 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:

Avs f

- REFERENCE

PRIZE

there are some experiments you should have performed, even without with your ship.

# REPORTER

Start from 1 and add/subtract



# SCORESHEET

Stage: 3 Fight 2 Z, Problem:

Germany Rosenheim: Rep.

Iran: Op.

Poland: Rev.

sign

*[Signature]*

Beck, Anatol

## 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:

the mass theory of the sinking bubble is not founded by your thoughts!

you have to cite the theory/hypothesis

## OPPONENT

Start from 1 and add/subtract

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

## 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:

very good question: is oil instead of air?

## REVIEWER

Start from 1 and add/subtract

$$1 + 1 + 2 + 1.5 + 1.5 - 0.5 = 6$$

## 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
- 2 — none
- 3 — 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:

could have asked more about his inspiration instead of formulas!

the question with the time-dependent position could not lead anywhere and the reporter did not quantify anything for the sinking process!

brought own thoughts of initial velocity dependency — but you have to explain why!



# REPORTER

Start from 1 and add/subtract



# SCORESHEET

Stage: 3 Fight 2 Z, Problem:

Germany Rosenheim: REP

Iran: OP

sign *Korner*

Korner, Marianne

Poland: REV

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 <input type="checkbox"/> almost no <input checked="" type="checkbox"/>	0 <input type="checkbox"/> almost no <input checked="" type="checkbox"/>	0 <input type="checkbox"/> too few <input checked="" type="checkbox"/>	0 <input type="checkbox"/> no/ almost no <input checked="" type="checkbox"/>	0 <input type="checkbox"/> others' data, incorrectly cited	0 <input type="checkbox"/> misunderstood	0 <input type="checkbox"/> unclear, chaotic	0 <input type="checkbox"/> too few <input checked="" type="checkbox"/>	0 <input type="checkbox"/> poor <input checked="" type="checkbox"/>	0 <input type="checkbox"/> concise and correct or no questions asked
1 <input type="checkbox"/> some	1 <input type="checkbox"/> some	1 <input type="checkbox"/> some	1 <input type="checkbox"/> some	1 <input type="checkbox"/> review of sources, cited <input checked="" type="checkbox"/>	1 <input type="checkbox"/> partly <input checked="" type="checkbox"/>	1 <input type="checkbox"/> partly clear <input checked="" type="checkbox"/>	1 <input type="checkbox"/> some	1 <input type="checkbox"/> some aspects fine	1 <input type="checkbox"/> some incorrect, inconclusive or too long
2 <input type="checkbox"/> fair	2 <input type="checkbox"/> fair	2 <input type="checkbox"/> fair	2 <input type="checkbox"/> not well fitting	2 <input type="checkbox"/> some own input	2 <input type="checkbox"/> average	2 <input type="checkbox"/> average	2 <input type="checkbox"/> many	2 <input type="checkbox"/> good	2 <input type="checkbox"/> some incorrect, inconclusive or too long
3 <input type="checkbox"/> good	3 <input type="checkbox"/> good	3 <input type="checkbox"/> well performed, sufficient number	3 <input type="checkbox"/> deviations qualitatively analysed	3 <input type="checkbox"/> + some interesting results	3 <input type="checkbox"/> some aspects above average	3 <input type="checkbox"/> some parts well done	3 <input type="checkbox"/> + data/theory convincingly supported	3 <input type="checkbox"/> some aspects efficient	3 <input type="checkbox"/> deeply incorrect or show deep misconceptions
4 <input type="checkbox"/> detailed demonstrative	4 <input type="checkbox"/> quite detailed, correct	4 <input type="checkbox"/> + results explained errors analysed	4 <input type="checkbox"/> + theory limits explained, conclusive	4 <input type="checkbox"/> considerable experimental or theoretical	4 <input type="checkbox"/> interesting solution	4 <input type="checkbox"/> overall clear, demonstrative	4 <input type="checkbox"/> proved deep understanding	4 <input type="checkbox"/> overall efficient	
5 <input type="checkbox"/> deep and comprehensible, shows physical insight	5 <input type="checkbox"/> detailed, complex, completely testable	5 <input type="checkbox"/> + reproducible, convincing analysis	5 <input type="checkbox"/> well fitting, deviations analysed, conclusive	5 <input type="checkbox"/> considerable experimental and theoretical	5 <input type="checkbox"/> greater extent than expected	5 <input type="checkbox"/> + complex concepts well communicated			

NOTES:

# OPPONENT

Start from 1 and add/subtract

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

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 <input type="checkbox"/> too few, mostly irrelevant	0 <input type="checkbox"/>	0 <input type="checkbox"/> almost nothing	0 <input type="checkbox"/> no or irrelevant	0 <input type="checkbox"/> too few	0 <input type="checkbox"/> no	0 <input type="checkbox"/> poor	0 <input type="checkbox"/> almost no	0 <input type="checkbox"/> too few	0 <input type="checkbox"/> poor	0 <input type="checkbox"/> no	0 <input type="checkbox"/> concise and correct or no questions asked
1 <input type="checkbox"/> relevant, aimed at resolving unclear points in the report	1 <input checked="" type="checkbox"/>	1 <input type="checkbox"/> some main points	1 <input type="checkbox"/> few	1 <input type="checkbox"/> some	1 <input type="checkbox"/> some	1 <input type="checkbox"/> reasonable	1 <input type="checkbox"/> few	1 <input type="checkbox"/> some	1 <input type="checkbox"/> some aspects fine	1 <input type="checkbox"/> some	1 <input type="checkbox"/> some incorrect, inconclusive or too long
2 <input type="checkbox"/> + short, apt and clear, well prioritized, all time used	2 <input type="checkbox"/>	2 <input checked="" type="checkbox"/> main points	2 <input type="checkbox"/> some	2 <input type="checkbox"/> some correct	2 <input type="checkbox"/> reasonable	2 <input type="checkbox"/> fair	2 <input type="checkbox"/> some	2 <input checked="" type="checkbox"/> some correct	2 <input checked="" type="checkbox"/> good	2 <input type="checkbox"/> reasonable	2 <input type="checkbox"/> some incorrect, inconclusive or too long
		3 <input type="checkbox"/> all relevant points	3 <input checked="" type="checkbox"/> many	3 <input type="checkbox"/> many correct	3 <input type="checkbox"/> fair	3 <input type="checkbox"/> efficient	3 <input type="checkbox"/> good	3 <input type="checkbox"/> many correct	3 <input type="checkbox"/> some aspects efficient	3 <input checked="" type="checkbox"/> fair	3 <input type="checkbox"/> deeply incorrect or show deep misconceptions
		4 <input type="checkbox"/> practically all points	4 <input type="checkbox"/> practically all	4 <input type="checkbox"/> + improvement suggestions	4 <input type="checkbox"/> very good	4 <input type="checkbox"/> + all time used	4 <input type="checkbox"/> new crucial point(s)	4 <input type="checkbox"/> + improvement suggestions	4 <input type="checkbox"/> overall efficient	4 <input type="checkbox"/> very good	4 <input type="checkbox"/> deeply incorrect or show deep misconceptions

NOTES:

# REVIEWER

Start from 1 and add/subtract

$$1 + 1 + 1.5 + 1 + 0.5 + 1 - 1 = 4.5$$

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 <input type="checkbox"/> too few, mostly irrelevant	0 <input type="checkbox"/>	0 <input type="checkbox"/> poor/wrong	0 <input type="checkbox"/> irrelevant	0 <input type="checkbox"/> no	0 <input type="checkbox"/> poor/wrong	0 <input type="checkbox"/> irrelevant	0 <input type="checkbox"/> no	0 <input type="checkbox"/> almost no	0 <input type="checkbox"/> too few	0 <input type="checkbox"/> irrelevant	0 <input type="checkbox"/> concise and correct or no questions asked
1 <input type="checkbox"/> relevant, meant to clarify unclear points	1 <input type="checkbox"/>	1 <input checked="" type="checkbox"/> partial	1 <input type="checkbox"/> partially relevant	1 <input type="checkbox"/> some	1 <input checked="" type="checkbox"/> too short/long	1 <input checked="" type="checkbox"/> partially relevant	1 <input type="checkbox"/> some	1 <input checked="" type="checkbox"/> too short/long	1 <input checked="" type="checkbox"/> some	1 <input type="checkbox"/> none	1 <input type="checkbox"/> some incorrect, inconclusive or too long
2 <input type="checkbox"/> + suitably allotted to Rep & Opp, most time used	2 <input type="checkbox"/>	2 <input type="checkbox"/> good	2 <input checked="" type="checkbox"/> mostly adequate	2 <input checked="" type="checkbox"/> reasonable	2 <input type="checkbox"/> informative, apt	2 <input type="checkbox"/> mostly adequate	2 <input type="checkbox"/> reasonable	2 <input type="checkbox"/> relevant parts	2 <input type="checkbox"/> many	2 <input type="checkbox"/> relevant, constructive	2 <input type="checkbox"/> some incorrect, inconclusive or too long
3 <input type="checkbox"/> + short, apt and clear, well prioritized, time managed efficiently	3 <input type="checkbox"/>	3 <input type="checkbox"/> detailed, complex	3 <input type="checkbox"/> fully adequate	3 <input type="checkbox"/> good	3 <input type="checkbox"/> condensed & accurate	3 <input type="checkbox"/> fully adequate	3 <input type="checkbox"/> good	3 <input type="checkbox"/> accurate, conclusive	3 <input type="checkbox"/> fully adequate	3 <input type="checkbox"/>	3 <input type="checkbox"/> deeply incorrect or show deep misconceptions

NOTES:

# REPORTER

Start from 1 and add/subtract



# SCORESHEET

Stage: 3 Fight 2 Z, Problem: 16

sign

Mnevets, Daniil

$$1 + 1 + 1 - 1 = 2$$

Germany Rosenheim:

Iran:

Poland:

REPORT 0.5-1	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

NOTES:

# OPPONENT

Start from 1 and add/subtract

$$1 + 0.5 + 2 + 1.5 - 0.5 = 5$$

QUESTIONS ASKED 0-0.5	OPPOSITION (SPEECH) 2-2.5	DISCUSSION WITH REPORTER 1-2	ANSWERS TO JURY and REVIEWER'S QUESTIONS
0	understanding of presentation	relevant scientific topics	own opinions presented
1	almost nothing	almost no	too few
2	some main points	few	some
3	main points	some	some correct
4	all relevant points	good	many correct
5	practically all points	new crucial point(s)	+ improvement suggestions

NOTES:

# REVIEWER

Start from 1 and add/subtract

$$1 + 0.5 + 1.5 + 2 + 0.5 - 1 = 4$$

QUESTIONS ASKED 0-0.5	REVIEW OF REPORT 1-1.5	REVIEW OF OPPOSITION 2	DISCUSSION ANALYSIS 0.5	MISSED POINTS POINTED OUT	ANSWERS TO JURY QUESTIONS
0	report evaluation & understanding	speech evaluation	discussion evaluation	correct own opinions	concise and correct or no questions asked
1	poor/wrong	poor/wrong	almost no	too few	some incorrect, inconclusive or too long
2	partial	too short/long	too short/long	some	deeply incorrect or show deep misconceptions
3	good	informative, apt	relevant parts	many	
4	detailed, complex	condensed & accurate	accurate, conclusive	fully adequate	

NOTES:



# REPORTER

Start from 1 and add/subtract



# SCORESHEET

Stage: 3 Fight 2 Z, Problem: 16

sign

*[Signature]*

Pfleger, Alexander

Germany Rosenheim:

Iran:

Poland:

## 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				deviations	+ some interesting results	some aspects above average	some parts well done
4	good	good	well performed, sufficient number	qualitatively analysed			
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

## 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

$$1 + 1 + 1.5 + 1.5 - 3.5 = 4$$

## 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:

## REVIEWER

Start from 1 and add/subtract

$$1 + 1 + 2.5 + 2.5 + 1 - 0.5 - 0.5 = 8$$

## 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:

## REPORTER

Start from 1 and add/subtract



## SCORESHEET

Stage: 3 Fight 2 Z, Problem: 16

Germany Rosenheim: Q. Kirchhoff &amp; N. Ahseani

Poland:

H. Supel

Worm, Paul

## 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:

About 5:30 Min still on clock

## OPPONENT

Start from 1 and add/subtract

$$1 + 0.5 + 2.5 + 1.5 - 0 = 6$$

## 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

1.0

$$1 + 0.5 + 2 + 2 + 0.75 - 0.75 = 4$$

## 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: Only one question



## REPORTER

Start from 1 and add/subtract



## SCORESHEET

Stage: 4 Fight 2 Z, Problem:

Iran: KHATIB

Poland: PETLIK

Gymnasium Freistadt:

Plesch, Martin

KÄFERBÖCK

## 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				deviations	+ some interesting results	some aspects above average	some parts well done
4	good	good	well performed, sufficient number	qualitatively analysed			
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

## 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:

short

## OPPONENT

Start from 1 and add/subtract

$$1 + 1.5 + 1.5 + 2.5 - \square = 6$$

## 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:

Agree with theory?

like

Def. decay

## REVIEWER

Start from 1 and add/subtract

$$1 + 0.25 + 1.5 + 0.6 + 0.75 \pm \square - \square = 5$$

## 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:

OPINIONS ON THEORY MISSING

REPORTER <sup>2</sup> Start from 1 and add/subtract

1 + 5 + ~~4~~ - 0 = 8



SCORESHEET  
Stage: 4 Fight 2 Z, Problem:  
Iran: Rep.

sign *field Mr*

Beck, Anatol

Poland: Op.

Gymnasium Freistadt: Rev.

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 <input checked="" type="checkbox"/> concise and correct or no questions asked
1 some	some <input checked="" type="checkbox"/>	some	some	review of sources, cited	partly	partly clear	1 some	some aspects fine	1 some incorrect,
2 fair	fair	fair	not well fitting	some own input	average	average	2 many <input checked="" type="checkbox"/>	good <input checked="" type="checkbox"/>	2 inconclusive or too long
3 good	good	well performed, sufficient number	deviations <input checked="" type="checkbox"/> qualitatively analysed	+ some interesting results	some aspects above average	some parts well done	3 + data/theory <input checked="" type="checkbox"/> convincingly supported	some aspects efficient <input checked="" type="checkbox"/>	3 deeply incorrect or show deep misconceptions
4 detailed demonstrative <input checked="" type="checkbox"/>	quite detailed, correct	+ results explained errors analysed	+ theory limits explained, conclusive	considerable experimental or theoretical <input checked="" type="checkbox"/>	interesting solution <input checked="" type="checkbox"/>	overall clear, demonstrative <input checked="" type="checkbox"/>	4 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:

the formula was tried for different radii!  
too complex for you and

theory was ~~also~~ understood but

OPPONENT <sup>2</sup> Start from 1 and add/subtract

1 + 1 + 2 + 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 <input checked="" type="checkbox"/>	poor	no	0 <input checked="" type="checkbox"/> concise and correct or no questions asked
1 <input checked="" type="checkbox"/> relevant, aimed at resolving unclear points in the report		some main points	few	some <input checked="" type="checkbox"/>	some	reasonable	1 few	some <input checked="" type="checkbox"/>	some aspects fine <input checked="" type="checkbox"/>	some	1 some incorrect,
2 + short, apt and clear, well prioritized, all time used		main points	some	some correct	reasonable	fair <input checked="" type="checkbox"/>	2 some	some correct	good <input checked="" type="checkbox"/>	reasonable <input checked="" type="checkbox"/>	2 inconclusive or too long
		all relevant points	many <input checked="" type="checkbox"/>	many correct	fair <input checked="" type="checkbox"/>	efficient	3 good <input checked="" type="checkbox"/>	many correct	some aspects efficient	fair	3 deeply incorrect or show deep misconceptions
		practically all points	practically all	+ improvement suggestions	very good	+ all time used	4 new crucial point(s)	+ improvement suggestions	overall efficient	very good	4

NOTES:

how can you ~~not~~ agree with the complex theory without any evidence it fits the experiments?  
e.g. why is theory valid? why do you what would be an easier/ your approach?

could if reporter does not have data, ask kindly for it and if rep. says "no" then leave it exp. or let her explain why she does not show the data.

REVIEWER <sup>1</sup> Start from 1 and add/subtract

1 + ~~4~~ + ~~2~~ + 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 <input checked="" type="checkbox"/>	-1 irrelevant	0 <input checked="" type="checkbox"/> concise and correct or no questions asked
1 <input checked="" type="checkbox"/> + suitably allotted to Rep & Opp, most time used		partial	partially relevant <input checked="" type="checkbox"/>	some	1 too short/long	partially relevant <input checked="" type="checkbox"/>	some	1 too short/long	some	0 <input checked="" type="checkbox"/> none	1 some incorrect,
2 + short, apt and clear, well prioritized, time managed efficiently		good <input checked="" type="checkbox"/>	mostly adequate	reasonable <input checked="" type="checkbox"/>	2 informative, apt <input checked="" type="checkbox"/>	mostly adequate	reasonable <input checked="" type="checkbox"/>	2 relevant parts <input checked="" type="checkbox"/>	many	1 relevant, constructive	2 deeply incorrect or show deep misconceptions
		detailed, complex	fully adequate	good	3 condensed & accurate	fully adequate	good	3 accurate, conclusive	fully adequate		

NOTES:

to you have to state your opinion!



# REPORTER

Start from 1 and add/subtract



# SCORESHEET

Stage: 4 Fight 2 Z, Problem:

sign

*Korner*

Korner, Marianne

Iran: *PRES*

Poland: *OP*

Gymnasium Freistadt: *REV*

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 --- <input checked="" type="checkbox"/> concise and correct or no questions asked 1 --- <input checked="" type="checkbox"/> some incorrect, inconclusive or too long 2 --- <input checked="" type="checkbox"/> deeply incorrect or show deep misconceptions
1 --- some	1 --- some	1 --- some	1 --- some <input checked="" type="checkbox"/>	1 --- review of sources, cited	1 --- partly	1 --- partly clear	1 --- some	1 --- some aspects fine	
2 --- <input checked="" type="checkbox"/> fair	2 --- <input checked="" type="checkbox"/> fair	2 --- fair	2 --- not well fitting	2 --- some own input	2 --- average	2 --- average	2 --- <input checked="" type="checkbox"/> many	2 --- <input checked="" type="checkbox"/> good	
3 --- good	3 --- good	3 --- well performed, sufficient number <input checked="" type="checkbox"/>	3 --- deviations qualitatively analysed	3 --- + some interesting results <input checked="" type="checkbox"/>	3 --- some aspects above average <input checked="" type="checkbox"/>	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 --- <input checked="" type="checkbox"/> 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			
6 ---	6 ---	6 ---	6 ---	6 ---	6 ---	6 ---			
7 ---	7 ---	7 ---	7 ---	7 ---	7 ---	7 ---			

NOTES:

# OPPONENT

Start from 1 and add/subtract

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

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 --- <input checked="" type="checkbox"/> too few	0 --- poor	0 --- no	0 --- <input checked="" type="checkbox"/> concise and correct or no questions asked 1 --- <input checked="" type="checkbox"/> some incorrect, inconclusive or too long 2 --- <input checked="" type="checkbox"/> deeply incorrect or show deep misconceptions
1 --- <input checked="" type="checkbox"/>	1 --- + short, apt and clear, well prioritized, all time used	1 --- <input checked="" type="checkbox"/> some main points	1 --- few	1 --- <input checked="" type="checkbox"/> some	1 --- some	1 --- reasonable	1 --- <input checked="" type="checkbox"/> few	1 --- some	1 --- some aspects fine	1 --- some	
2 ---		2 --- main points	2 --- <input checked="" type="checkbox"/> some	2 --- some correct	2 --- <input checked="" type="checkbox"/> reasonable	2 --- <input checked="" type="checkbox"/> fair	2 --- some	2 --- some correct	2 --- <input checked="" type="checkbox"/> good	2 --- <input checked="" type="checkbox"/> reasonable	
3 ---		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 ---		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

$$1 + 2 + 2 + 2 + 1 - 0.5 - 0.5 = 7$$

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	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 --- <input checked="" type="checkbox"/> concise and correct or no questions asked 1 --- <input checked="" type="checkbox"/> some incorrect, inconclusive or too long 2 --- <input checked="" type="checkbox"/> deeply incorrect or show deep misconceptions
1 --- + suitably allotted to Rep & Opp, most time used	1 ---	1 --- partial	1 --- partially relevant	1 --- some	1 --- too short/long	1 --- partially relevant	1 --- some	1 --- too short/long	1 --- some	1 --- none	
2 --- <input checked="" type="checkbox"/> + short, apt and clear, well prioritized, time managed efficiently	2 ---	2 --- <input checked="" type="checkbox"/> good	2 --- <input checked="" type="checkbox"/> mostly adequate	2 --- <input checked="" type="checkbox"/> reasonable	2 --- <input checked="" type="checkbox"/> informative, apt	2 --- <input checked="" type="checkbox"/> mostly adequate	2 --- <input checked="" type="checkbox"/> reasonable	2 --- <input checked="" type="checkbox"/> relevant parts	2 --- <input checked="" type="checkbox"/> many	2 --- relevant, constructive	
		3 --- detailed, complex	3 --- fully adequate	3 --- good	3 --- condensed & accurate	3 --- fully adequate	3 --- good	3 --- accurate, conclusive	3 --- fully adequate		

NOTES:

# REPORTER

Start from 1 and add/subtract



# SCORESHEET

Stage: 4 Fight 2 Z, Problem: 15

sign

*[Signature]*

Mnevets, Daniil

Iran:

Poland:

Gymnasium Freistadt:

REPORT 2-3.5							DISCUSSION WITH OPPONENT 0.5-1		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	some	some	some	review of sources, cited	partly	partly clear	1 - some	some aspects fine	1 - some incorrect, inconclusive or too long
2 - fair	fair	fair	not well fitting	some own input	average	average	2 - many	good	2 - deeply incorrect or show deep misconceptions
3 - good	good	well performed, sufficient number	deviations qualitatively analysed	+ 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	+ theory limits explained, conclusive	considerable experimental or theoretical	interesting solution	overall clear, demonstrative		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:

# OPPONENT

Start from 1 and add/subtract

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

QUESTIONS ASKED		OPPOSITION (SPEECH) 2-3					DISCUSSION WITH REPORTER 1.5-2				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 - 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 - relevant, aimed at resolving unclear points in the report		1 - some main points	few	some	some	reasonable	1 - few	some	some aspects fine	some	1 - some incorrect, inconclusive or too long
2 - + short, apt and clear, well prioritized, all time used		2 - main points	some	some correct	reasonable	fair	2 - some good	some correct	good	fair	2 - deeply incorrect or show deep misconceptions
		3 - all relevant points	many	many correct	fair	efficient	3 - new crucial point(s)	+ improvement suggestions	overall efficient	very good	
		4 - practically all points	practically all	+ improvement suggestions	very good	+ all time used					

NOTES:

# REVIEWER

Start from 1 and add/subtract

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

QUESTIONS ASKED 0-0.5		REVIEW OF REPORT 1-1.5			REVIEW OF OPPOSITION 1.5-2			DISCUSSION ANALYSIS 1		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 - 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 - + suitably allotted to Rep & Opp, most time used		1 - partial	partially relevant	some	1 - too short/long	partially relevant	some	1 - too short/long	some	0 - none	1 - some incorrect, inconclusive or too long
2 - + short, apt and clear, well prioritized, time managed efficiently		2 - good	mostly adequate	reasonable	2 - informative, apt	mostly adequate	reasonable	2 - relevant parts	many	1 - relevant, constructive	2 - deeply incorrect or show deep misconceptions
		3 - detailed, complex	fully adequate	good	3 - condensed & accurate	fully adequate	good	3 - accurate, conclusive	fully adequate		

NOTES:



## REPORTER

Start from 1 and add/subtract



## SCORESHEET

Stage: 4 Fight 2 Z, Problem: 15

sign

Pfleger, Alexander

Iran:

Poland:

Gymnasium Freistadt:

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	some	some	some	review of sources, cited	partly	partly clear	1 --- some	some aspects fine	1 --- some incorrect, inconclusive or too long
2 --- fair	fair	fair	not well fitting	* some own input	average	average	2 --- many	good	2 --- deeply incorrect or show deep misconceptions
3 --- good	good	well performed, sufficient number	deviations qualitatively analysed	+ 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	+ theory limits explained, conclusive	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	well fitting, deviations analysed, 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		0 --- 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 --- relevant, aimed at resolving unclear points in the report		1 --- some main points	few	some	some	reasonable	1 --- few	some	some aspects fine	some	1 --- some incorrect, inconclusive or too long
2 --- + short, apt and clear, well prioritized, all time used		2 --- main points	some	some correct	reasonable	fair	2 --- some	some correct	good	reasonable	2 --- deeply incorrect or show deep misconceptions
		3 --- all relevant points	many	many correct	fair	efficient	3 --- good	many correct	some aspects efficient	fair	
		4 --- 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

$$1 + 0.5 + 2.25 + 2.25 + 1 + 0 - 0 = 7$$

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		0 --- 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 --- relevant, meant to clarify unclear points		1 --- partial	partially relevant	some	1 --- too short/long	partially relevant	some	1 --- too short/long	some	0 --- none	1 --- some incorrect, inconclusive or too long
2 --- + suitably allotted to Rep & Opp, most time used		2 --- good	mostly adequate	reasonable	2 --- informative, apt	mostly adequate	reasonable	2 --- relevant parts	many	1 --- relevant, constructive	2 --- deeply incorrect or show deep misconceptions
3 --- + short, apt and clear, well prioritized, time managed efficiently		3 --- detailed, complex	fully adequate	good	3 --- condensed & accurate	fully adequate	good	3 --- accurate, conclusive	fully adequate		

NOTES:

REPORTER 3

Start from 1 and add/subtract



SCORESHEET

Stage: 4 Fight 2 Z, Problem: 15

Iran: N. Khatib

Poland: S. P.

SIGN

Worm, Paul

Gymnasium Freistadt: A. Kaferböck

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	some	some	some	review of sources, cited	partly	partly clear	1 --- some	some aspects fine	1 --- some incorrect, inconclusive or too long
2 --- fair	fair	fair	not well fitting	some own input	average	average	2 --- many	good	2 --- deeply incorrect or show deep misconceptions
3 --- good	good	well performed	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	+ theory limits explained, conclusive	considerable experimental or theoretical	interesting solution	overall clear, demonstrative		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:

OPPONENT 3

Start from 1 and add/subtract

$$1 + 1 + 2 + 1.5 - 0 = 7$$

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		0 --- 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 --- relevant, aimed at resolving unclear points in the report		1 --- some main points	few	some	some	reasonable	1 --- few	some	some aspects fine	some	1 --- some incorrect, inconclusive or too long
2 --- + short, apt and clear, well prioritized, all time used		2 --- main points	some	some correct	reasonable	fair	2 --- some	some correct	good	reasonable	2 --- deeply incorrect or show deep misconceptions
		3 --- all relevant points	many	many correct	fair	efficient	3 --- good	many correct	some aspects efficient	fair	
		4 --- 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

$$1 + 0.5 + 2 + 1.5 + 0.5 - 0 - 0 = 6$$

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		0 --- 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 --- + suitably allotted to Rep & Opp, most time used		1 --- partial	partially relevant	some	1 --- too short/long	partially relevant	some	1 --- too short/long	some	1 --- none	1 --- some incorrect, inconclusive or too long
2 --- + short, apt and clear, well prioritized, time managed efficiently		2 --- good	mostly adequate	reasonable	2 --- informative, apt	mostly adequate	reasonable	2 --- relevant parts	many	2 --- relevant, constructive	2 --- deeply incorrect or show deep misconceptions
		3 --- detailed, complex	fully adequate	good	3 --- condensed & accurate	fully adequate	good	3 --- accurate, conclusive	fully adequate		

NOTES: