General	Excellent	Good	Sufficient	Insufficient
Presentation:	3	2	1	0
name, date, experiment name, all relevant	All 6 criteria met	5 criteria met	3-4 criteria met	< 3 criteria met
sections present, page numbers, highlighted result	All o cinteria met	J chiena met	5-4 cinteria met	S chiena met
	3	2	1	0
<b>Units</b> to all values	100%	>75%	>50%	<50%
	3	2	1	0
Significant digits	100%	>75%	>50%	<50%
Results written in consistent and common format	3	2	1	0
(e.g. value ± uncertainty)	100%	>75%	>50%	<50%
Subtotal:				/ 12
Measurements				
	3	2	1	0
<b>Clarity</b> of measurement procedure	Clear without	Need prior	Not understandable	No description at
(How was it measured? What was measured?)	prior knowledge	knowledge /	/incomplete	all
(now was it measured: what was measured:)		manual to	description	
		understand		
Completeness of measurements (are all	3	2	1	0
measurements present?)	100%	>75%	>50%	<50%
Uncertainties present for all measurements	3	2	1	0
	100%	>75%	>50%	<50%
Accuracy of the measured values	<b>3</b> Very accurate	<b>2</b> Mostly as	<b>1</b> Some values are	<b>0</b> Values are not
(how close to the expected values)	very accurate	expected	quite off	realistic
Presence of required equations	3	<b>2</b>	1	0
(clear for every result how it was obtained?)	100%	>75%	>50%	<50%
Completeness of results and error calculation (are	3	2	1	0
all results and error calculations present?)	100%	>75%	>50%	<50%
Subtotal:		L		/ 18
Graphs				
Graphs Presence of required graphs	3	2	1	0
Presence of required graphs	<b>3</b>	<b>2</b> >75%	1 >50%	<b>0</b> <50%
Presence of required graphs (are all measurements present?)	3 100% 3	2 >75% 2	1 >50% 1	0 <50% 0
Presence of required graphs	100%	>75%	>50%	<50%
Presence of required graphs (are all measurements present?)  Axes label with units	100% 3	>75%	>50%	<50% <b>0</b>
Presence of required graphs (are all measurements present?)	100% <b>3</b> 100%	>75% <b>2</b> >75%	>50% 1 >50%	<50% <b>0</b> <50%
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)	100% 3 100% 3	>75% 2 >75% 2	>50% 1 >50% 1 >50%	<50% 0 <50% 0
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit	100% 3 100% 3 100%	>75% 2 >75% 2 >75% 2 >75%	>50% 1 >50% 1 >50% 1 >50%	<50% 0 <50% 0 <50%
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)	100% 3 100% 3 100% 3 Fits well, fitted model is clear	>75%  2 >75%  2 >75%  2 >75%  2 Does not fit well / model unclear	>50%  1 >50%  1 >50%  1 Sometimes and the second accurate	<50%  0 <50%  0 <50%  0 <50%  No fit
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3	>75%  2 >75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2	>50%  1 >50%  1 >50%  1 >50%  1 Bad fit, model not accurate  1	<50% 0 <50% 0 <50% 0 <50% No fit
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well	>75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not	>50%  1 >50%  1 >50%  1 Sometimes and the second accurate	<50%  0 <50%  0 <50%  0 <50%  No fit
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3	>75%  2 >75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2	>50%  1 >50%  1 >50%  1 >50%  1 Bad fit, model not accurate  1	<50%  0 <50%  0 <50%  0 <50%  No fit  0 No captions
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well	>75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not	>50%  1 >50%  1 >50%  1 >50%  1 Bad fit, model not accurate  1	<50% 0 <50% 0 <50% 0 <50% No fit
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:  Report	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well described	>75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not described fully	>50%  1 >50%  1 >50%  1 Bad fit, model not accurate  1 Merely figure titles	<50%  0 <50%  0 <50%  0 <50%  No fit  0 No captions  / 15
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:  Report  Structure (e.g. report has the proper sections,	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well described	>75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not described fully	>50%  1 >50%  1 >50%  1 Bad fit, model not accurate  1 Merely figure titles	<50%  0 <50%  0 <50%  0 No fit  0 No captions  / 15
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:  Report	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well described  3 Great	>75%  2 >75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not described fully  2 Good	>50%  1 >50%  1 >50%  1 Bad fit, model not accurate  1 Merely figure titles	<50%  0 <50%  0 <50%  0 No fit  0 No captions  / 15
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:  Report  Structure (e.g. report has the proper sections,	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well described  3 Great 3	>75%  2 >75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not described fully  2 Good  2	>50%  1 >50%  1 >50%  1 Softing the state of	<50%  0 <50%  0 <50%  0 No fit  0 No captions  / 15
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:  Report  Structure (e.g. report has the proper sections, continuity)	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well described  3 Great 3 Great	>75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not described fully  2 Good  2 Good	>50%  1 >50%  1 >50%  1 Sometimes of the second of the sec	<50%  0 <50%  0 <50%  0 No fit  0 No captions  / 15  0 Bad  0 Bad
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:  Report  Structure (e.g. report has the proper sections, continuity)  Language (English, typesetting, scientific language)  Consistency (switch active / passive voice, "I" vs.	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well described  3 Great 3 Great 3	>75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not described fully  2 Good 2 Good 2	>50%  1 >50%  1 >50%  1 Sometimes of the second of the sec	<50%  0 <50%  0 <50%  0 No fit  0 No captions  / 15  0 Bad  0 Bad  0
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:  Report  Structure (e.g. report has the proper sections, continuity)  Language (English, typesetting, scientific language)	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well described  3 Great 3 Great	>75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not described fully  2 Good  2 Good  2 Minor	>50%  1 >50%  1 >50%  1 Sometimes of the second of the sec	<50%  0 <50%  0 <50%  0 No fit  0 No captions  / 15  0 Bad  0 Bad
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:  Report  Structure (e.g. report has the proper sections, continuity)  Language (English, typesetting, scientific language)  Consistency (switch active / passive voice, "1" vs. "we", tenses)	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well described  3 Great 3 Great 3	>75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not described fully  2 Good 2 Good 2	>50%  1 >50%  1 >50%  1 Sometimes of the second of the sec	<50%  0 <50%  0 <50%  0 No fit  0 No captions  / 15  0 Bad  0 Fully mixed
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:  Report  Structure (e.g. report has the proper sections, continuity)  Language (English, typesetting, scientific language)  Consistency (switch active / passive voice, "I" vs. "we", tenses)  General impression	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well described  3 Great 3 Consistent	>75%  2 >75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not described fully  2 Good  2 Good  2 Minor inconsistencies	>50%  1 >50%  1 >50%  1 S50%  1 Bad fit, model not accurate  1 Merely figure titles  1 Sufficient  1 Sufficient  1 Rather chaotic	<50%  0 <50%  0 <50%  0 No fit  0 No captions  / 15  0 Bad  0 Bad  0
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:  Report  Structure (e.g. report has the proper sections, continuity)  Language (English, typesetting, scientific language)  Consistency (switch active / passive voice, "I" vs. "we", tenses)  General impression (Layout, presentation, length)	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well described  3 Great 3 Great 3 Consistent	>75%  2 >75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not described fully  2 Good  2 Good  2 Minor inconsistencies  2	>50%  1 >50%  1 >50%  1 S50%  1 Bad fit, model not accurate  1 Merely figure titles  1 Sufficient  1 Sufficient  1 Rather chaotic	<50%  0 <50%  0 <50%  0 No fit  0 No captions  / 15  0 Bad  0 Fully mixed
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:  Report  Structure (e.g. report has the proper sections, continuity)  Language (English, typesetting, scientific language)  Consistency (switch active / passive voice, "I" vs. "we", tenses)  General impression (Layout, presentation, length)  Discussion of final results and comparison with	100% 3 100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well described  3 Great 3 Consistent 3 Perfect	>75%  2 >75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not described fully  2 Good  2 Good  2 Minor inconsistencies  2 Good	>50%  1 >50%  1 >50%  1 Some accurate  1 Merely figure titles  1 Sufficient  1 Rather chaotic  1 Sufficient  1 Sufficient	<50%  0 <50%  0 <50%  0 No fit  0 No captions  / 15  0 Bad  0 Fully mixed  0 Bad
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:  Report  Structure (e.g. report has the proper sections, continuity)  Language (English, typesetting, scientific language)  Consistency (switch active / passive voice, "I" vs. "we", tenses)  General impression (Layout, presentation, length)	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well described  3 Great 3 Consistent 3 Perfect 6	>75%  2 >75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not described fully  2 Good  2 Good  2 Minor inconsistencies  2 Good  4	>50%  1 >50%  1 >50%  1 Sofficient  1 Sufficient  1 Rather chaotic  2	<50%  0 <50%  0 <50%  0 No fit  0 No captions  / 15  0 Bad  0 Fully mixed  0 Bad  0 Bad
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:  Report  Structure (e.g. report has the proper sections, continuity)  Language (English, typesetting, scientific language)  Consistency (switch active / passive voice, "I" vs. "we", tenses)  General impression (Layout, presentation, length)  Discussion of final results and comparison with	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well described  3 Great 3 Great 3 Consistent 3 Perfect 6 Exhausting and	>75%  2 >75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not described fully  2 Good  2 Good  2 Minor inconsistencies  2 Good  4 Simple comparison,	>50%  1 >50%  1 >50%  1 Sofficient  1 Sufficient  1 Rather chaotic  2 Only descriptive,	<50%  0 <50%  0 <50%  0 No fit  0 No captions  / 15  0 Bad 0 Fully mixed  0 No discussion at
Presence of required graphs (are all measurements present?)  Axes label with units  Uncertainties in the graph (error bars)  Fit (accuracy as well as description of fit model)  Presence of figure captions (how well is the figure described)  Subtotal:  Report  Structure (e.g. report has the proper sections, continuity)  Language (English, typesetting, scientific language)  Consistency (switch active / passive voice, "I" vs. "we", tenses)  General impression (Layout, presentation, length)  Discussion of final results and comparison with expected results / literature values	100% 3 100% 3 100% 3 Fits well, fitted model is clear 3 The figure is well described  3 Great 3 Great 3 Consistent 3 Perfect 6 Exhausting and	>75%  2 >75%  2 >75%  2 >75%  2 Does not fit well / model unclear  2 The figure is not described fully  2 Good  2 Good  2 Minor inconsistencies  2 Good  4 Simple comparison,	>50%  1 >50%  1 >50%  1 Sofficient  1 Sufficient  1 Rather chaotic  2 Only descriptive,	<50%  0 <50%  0 <50%  0 No fit  0 No captions  / 15  0 Bad 0 Bad 0 Fully mixed  0 No discussion at all

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## Please note:

This table should serve as general guideline of how to grade reports. It is not complete and needs adaption to the specific experiment (e.g. if tables are required, no graphs are present, no fits are requested etc.)

The experimental performance should be judged separately, with criteria similar to:

- How well was the performance?
- How much help and input from the assistant was needed?
- Were the students careful with the equipment?
- Did the students know what the next step was?
- Was the procedure clear or more "try and error"?
- Was it clear why which quantity was measured?

Ideally, two separate grades are given for both, the experimental performance and report-writing, respectively.

## **Grading:**

The Swiss grading system ranges from 6 to 1, with the following correspondence:

6 = excellent; 5 = good; 4 = sufficient; 3 = insufficient; 2 = bad; 1 = very bad

Thus, in order to get a sufficient grade, 60% of the maximal achievable points are required. The formula to convert percentages of points (=(#points\_achieved/max\_points)\*100) to grades is therefore (#\_of\_points / 20 ) + 1. Example: In the grid above, 60 points is the maximum. If somebody achieves 44 points (=70% of 60 points), then the grade is 70/20+1=4.5

Version from Monday, 22 February 2021.

Compiled by A. Eggenberger, based on inputs by N. Le Biavan, includes inputs from M. Spörri and M. Kroner.

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