

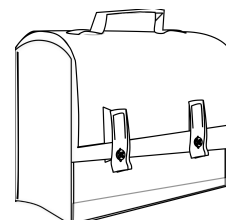


MYP 1-5

| | | | |
|-------------|----------------------------|-------------|--------------|
| NAME | The faculty of mathematics | DATE | January 2017 |
|-------------|----------------------------|-------------|--------------|

Guidance on how to write an MYP mathematics investigation

Mathematical investigations here at RCHK are used by the department to assess your understanding of content taught and develop your skills of investigating patterns, communicating mathematically and applying mathematics in authentic real-life contexts. As such, they are an important part of our curriculum and being able to write a well developed piece of work is in itself a skill that needs to be fostered.



Whilst not all investigations are the same, there are some commonalities running through them and the information given here has been designed to address these and give you the best chance of success.

Guidelines

The tables below shows steps that should generally be taken and the assessment criteria each step is connected to. Be aware that not all steps are applicable to every investigation.

Ultimately, you are looking to produce a piece of work that it logical in its structure, accurate in its findings and one that can be read and understood by someone who does not have the task sheet.

Criteria B & C assessments

| | Action | Criteria |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1 | Write your name, the title of the task and the date. | |
| 2 | Read the whole task twice. Identify the key words - you may want to highlight or underline them. | |
| 3 | Read the assessment rubric to remind yourself of what your teacher is looking for in your work. | |
| 4 | Write one or two sentences to explain what the task is about and what you have to do. | C |
| 5 | Start to collect some data. This often involves drawing diagrams. If your data comes from physical measurements, state what units you used, and what degree of accuracy you measured to. | B, C |
| 6 | Put your results in a table. Make sure your table has clear headings. | C |
| 7 | Look for a pattern in your results. Describe your pattern in words. | B, C |
| 8 | Try to write a rule using algebra that fits your pattern. Define your variables. | B, C |
| 9 | Use your rule to predict new results and test them. State if you were correct. If not, refine your rule. | B |
| 10 | Try to explain why your rule works. This could be by introducing more algebra to illustrate a final general case or by referring to diagrams which can be used in showing where each part of the rule relates to. | B, C |

Criteria D assessments

| | Action | Criteria |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1 | Write your name, the title of the task and the date. | |
| 2 | Read the whole task twice. Identify the key words - you may want to highlight or underline them. | |
| 3 | Read the assessment rubric to remind yourself of what your teacher is looking for in your work. | |
| 4 | Write one or two sentences to explain what the task is about and what you have to do. Include references to specific mathematical features of the task. | D |
| 5 | Decide on the area of mathematics you will need to use and then specifically what parts. For example: <i>number > factors > prime factorisation</i> . | D |
| 6 | Think about in what way this chosen mathematics can be applied to the problem and in which order it should be used. | D |
| 7 | Apply your strategy to the problem. If you are not making progress consider if you are using the most appropriate mathematics in the context of the problem or if you are applying your maths in a sensible order. | D |
| 8 | Look at the solution you have come to. Does it make sense or not and how do you know? | D |
| 9 | Explain the degree of accuracy of your solution. | D |
| 10 | Suggest possible alternatives for solving the problem and discuss if they may have been more effective. | D |