

## **Subject-based Strategies for PSLE Mathematics and Foundation Mathematics**

In every subject, there needs to have a strategy in order to do well in its assessment. Having the knowledge of a subject is not the same as showing and explaining to someone else how much you know of the subject.

The following paragraphs will provide you with helpful information and tips to reflect to the markers of your tests and examinations, how much knowledge and application you have towards Mathematics in general.

### **Adopt a framework towards problem solving**

George Polya (1887 – 1985) was a Hungarian Mathematician who devised a technique of problem solving. This is widely recognised and applied in our local schools today as a structure, to guide students to solve Mathematics problems. In general, to solve a word problem, remember to follow these steps:

1) Understand the problem

We need to make sure we understand all the words in the question, and have a grasp of the information that is given, inferred from and what the question is asking for. When we are sure of all these, then we will be able to move on to deciding which method of solving is most suitable for the question. You may want to use a pencil or highlighter to mark out crucial information presented in a word problem in order to understand it better.

2) Devise a plan

There are so many methods of problem solving and in order to select the most suitable method, lots of practice before the examination itself is needed so that you will gain good enough experience with various question types to wisely choose the method best suited for it. Examples of strategies include heuristics such as 'using a model', 'working backwards' and 'making a supposition'.

3) Carry out the plan

Once the method of problem solving is decided upon, you can then use the information given in the question to come up with a series of steps that lead to the answer.

Do not be disheartened if your plan does not work out. This means that there might be a more suitable method and that it is perfectly alright to forgo the method you have previously chosen to try out another. This may just work to your favour!

4) Look back

This part consists of reflecting upon what worked well and what did not, in the process of solving the problem. The time proportioned for reflection helps you gain experience and insight when it comes to solving similar questions in the future.

(adapted from <https://math.berkeley.edu/~gmelvin/polya.pdf>)

### **Minimising Making Careless Mistakes**

Careless mistakes give us grades that undermine the true ability of our grasp of Mathematics. It is a pity if most of our mistakes stem from being careless. Imagine adding back to an examination paper the marks lost through careless mistakes! That might very well bring you up a grade or two.

Below is a non-exhaustive list of ways to minimise carelessness in any piece of Mathematics examination. Ensure that

- 1) all your answers for multiple-choice questions tally with the shaded ovals in the optical answer sheet (OAS).
- 2) all errant answers on the OAS are erased cleanly using a dust-free eraser, so that there will not be multiple answers detected by the OAS scanning machine.
- 3) you have flipped through the entire examination paper to ensure that all questions have been attempted.
- 4) you redid all questions by working through all calculations manually (in paper 1) or using a calculator (in paper 2) so as to spot any mistake in the initial working.

Most importantly, an alert mind is a working mind. Do not forget to have adequate rest throughout your PSLE preparation, especially the night before the examination paper. You will experience such a sense of restedness and mental strength to last you through the following day's challenge.

Take care!

Submitted by: Ms Rebecca Seow