

South Australian Investigating with Mathematics Competition 2024

GUIDELINES FOR 'COMPLETING THE INVESTIGATION'



SEE

2

PLAN

3

DO

4

CHECK

UNDERSTANDING THE TASK

- Identify the task you want to explore.
- Brainstorm ideas.

QUESTIONS TO CONSIDER

- What do I already know?
- What is the purpose of the task?
- What information will I need to look for?

STRATEGIES FOR SOLVING UNFAMILIAR PROBLEMS

Trial & error * Guessing, checking & improving * Gathering data * Acting it out * Diagrams & graphs * Working backwards * Looking for patterns * Simplifying the problem * Comparing with similar problems * Elimination of possibilities * Using a list, table, materials and models * Acting it out * Writing an equation * Using a formula

DECIDING ON A STRATEGY OR PLAN

- Gather relevant / useful information.
- Make some predictions or guesses.
- Think about the different strategies you may use.
- Decide what strategies may suit your investigative task.
- Write down your plan.

QUESTIONS TO CONSIDER

- How am I going to solve this task?
- Have I seen a similar task?
- How can what I know help with what I do not know.?

MATHEMATICAL PROCESSES THAT CAN BE USED

Questioning * Generalising * Exploring * Collecting Data * Analysing * Predicting * Reflecting * Hypothesising * Comparing * Classifying * Justifying * Interpreting * Proving * Experimenting * Estimating * Visualization * Abstraction * Test conjecture

SOLVING THE TASK

- Work through one step at a time.
- Complete each step carefully.
- Explain and show how you reach your answer.
- Reflect on where you are at and what you have discovered.
- Re-think and modify your strategies as needed.
- Create a new plan if necessary.

QUESTIONS TO CONSIDER

- What do I do next?
- Have I proved I am correct?
- Do I continue with my plan?
- Is my plan working?
- Do I need to change my plan?
- Have you checked the 'Marking Rubric'? ([click here](#))

CHECKING YOUR RESULTS

- Think carefully and examine your findings.
- Explain your findings.

REFLECTION AND SELF ASSESSMENT

- Do my interpretations of my findings relate to the original question?
- Is there another strategy I could have used to determine the outcome/s?

QUESTIONS TO CONSIDER

- How can I check my result?
- Have I used all the relevant information?
- Do my explanations make sense?

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