

Problem - Solving: Strategies and Skills

The Problem - Solving Process

Step 1: Understand The Problem



- Highlight or underline key words in the problem.
- Read the problem multiple times and simplify, if needed.
- Read the question carefully.
- Rewrite the question in your own words.

Step 2: Devise A Plan



- Choose a strategy to use.
- Decide which operation to use.
- Collect any objects that may be needed.

Step 3: Carry Out The Plan



- Estimate an answer to the problem.
- Use the planned strategy.
- Change the strategy, if the planned strategy is not suitable.
- Show all working out.
- Complete any calculations.
- Answer the question.

Step 4: Check Solution



- Compare the answer to the estimation.
- Check the reasonableness of the answer.
- Use inverse operations to check the answer.
- Review the effectiveness of the strategy used.

Problem - Solving Strategies:

Find Key Information

Underline, circle or highlight key mathematical terms, numbers or other information before solving the problem.

Draw An Image

Use a diagram, pictures or symbols to represent parts of the problem.

Use Manipulatives Or Objects

Use objects, including place value blocks, shapes and beads, to represent parts of the problem.

Find A Pattern

Look for a pattern in the problem. This pattern could involve numbers, shapes, colours and sizes.

Make A List

Sort information in a word problem into an organised list. This is useful for ordering numbers or making combinations. (A man has 5 shirts and 3 pairs of shorts. How many shirt and short combinations can he wear?)

Make A Table Or Chart

Organise information in a word problem into a table. This is useful for making comparisons, looking at place value or finding patterns.

Write An Equation

Select important information and use an equation or a number sentence to solve the problem.

Simplify The Problem

Extract important information to make the problem simpler. Solve smaller parts within the problem before writing the answer.

Work Backwards

Start from the information at the end of the problem, working backwards to solve the problem.

Guess, Check, Improve Or Estimate

Make an educated guess of what the answer may be, check to see if it works and then improve your guess. This is useful for finding missing information.