



Process ideas

- In the Numeracy assessment you will need to be able to solve mathematical problems in a range of meaningful situations using three process ideas.

You will need to:

- Formulate** approaches to solving problems. This means working out how to solve a problem.
- Use** mathematics and statistics in a range of situations.
- Explain** whether answers and statements are reasonable.

1 Formulate approaches to solving problems

- These questions will require you to work out **how** to solve the problem.
- Usually there are several steps needed to find the answer.

Example:

Amanda's letterbox is 900 m from her house. It takes her 12 minutes to walk to it. Explain how you could calculate her speed in km/hour. You could do this in two ways:

- i Show the calculation with speech bubbles:

Convert metres to kilometres by dividing by 1000.

$$\begin{aligned} \text{Speed} &= \frac{900}{1000} \text{ km in } \frac{12}{60} \text{ hours} \\ &= 0.9 \text{ km in } 0.2 \text{ hours} \\ &= 4.5 \text{ km in } 1 \text{ hour} \\ \text{Speed} &= 4.5 \text{ km/hour} \end{aligned}$$

Convert minutes to hours by dividing by 60.

Multiply both figures by 5 to convert 0.2 hours to 1 hour.

- ii Explain each stage of the calculation in sentences:

1 kilometre = 1000 m so divide 900 m by 1000 to convert it to kilometres: 0.9 km
 1 hour = 60 minutes so divide 12 minutes by 60 to convert it to hours: 0.2 hours
 To convert 0.9 km in 0.2 hours to distance walked in 1 hour, multiply both values by 5.
 Her speed was 4.5 km/hour.

Answer the following questions.

- 1 Josephine went shopping for four house plants. Single plants cost \$12.95.

However, the shop has two deals:

Deal 1: Two plants for \$22.50.

Deal 2: 20% off if you buy three plants or more.

Which is the best deal for four plants?


