

Using Formulae

We expect pupils to use simple formulae at Level 4 by:

- Writing down the formula first
- Rewriting the formula replacing the letters by the appropriate numbers (substitution)
- Solving the equation
- Interpreting the answer and putting the appropriate units back into context.

WORKED EXAMPLES

The length of a string S mm for the weight of W grams is given by the formula:

$$S = 16 + 3W$$

(a) Find S when $W = 3$ grams

$$S = 16 + 3W$$

Write formula

$$S = 16 + 3 \times 3$$

replace letters by numbers

$$S = 16 + 9$$

Solve the equation

$$S = 25$$

Length of string is 25 mm (interpret result in context)

(b) Find W when $S = 20.5$ mm

$$S = 16 + 3W$$

Write formula

$$20.5 = 16 + 3W$$

Replace letters by numbers

$$4.5 = 3W$$

Solve the equation

$$1.5 = W$$

The weight is 1.5g

Interpret result in context

WE DO NOT:

- Rearrange the formula before substitution (*too difficult*)
- State the answer only; working must be shown.