

Skills practice A

Reasoning

1 Match these algebra cards.

2 more than n $2 \times n$ 2 less than n $n \times 2$ 2 plus n $n + n$ n added to n $n - 2$ $2n$ $n + 2$ twice n $2 + n$

2 Write algebraic expressions for the following.

a b plus 2**b** 6 lots of b **c** b minus 2**d** 2 lots of b **e** 6 less than b **f** 7 more than b **g** b multiplied by 3**h** b squared**i** a lots of b .

3 Work out the value of these expressions.

a $b + 7$ **b** $10b$ **c** $12 + b$.when **i** $b = 2$ **ii** $b = 3$ **iii** $b = 4$.

Reasoning

4 **a** Find the values of $2c$, $3c$ and $5c$ when

i $c = 2$ **ii** $c = 3$ **iii** $c = 4$.**b** For each value of c , show that $2c + 3c$ is the same as $5c$.

5 Work out the value of $3a + 2b$ when

a $a = 2$ and $b = 3$ **b** $a = 4$ and $b = 5$ **c** $a = 4$ and $b = 1$ **d** $a = 0$ and $b = 7$.

Reasoning

6 **a** A school shop sells calculators for £3 each.

i The shop sells five calculators.

How much money has the shop received?

ii A formula is used to work out the takings at the end of the day. c stands for the number of calculators sold. T stands for the amount of money received in pounds.

Which of these formulae is correct?

$$T = c \div 3$$

$$T = c + 3$$

$$T = 3c$$

**b** The shop also sells geometry sets for £2 each. g stands for the number of geometry sets sold.

Write an expression for the amount of money received for geometry sets.

c What does the formula $T = 3c + 2g$ work out?

- 7 A shop sells clothes.



- a Write down how you would work out the cost of
- i two pairs of jeans and three T-shirts
 - ii three pairs of jeans and four T-shirts.
- b Use j for the number of pairs of jeans.
Use t for the number of T-shirts.
Copy and complete this formula.
- $$\text{Cost (£)} = 30 \times \square + 10 \square$$
- c Work out the cost of four pairs of jeans and three T-shirts.