**Day 128** **C Tier 10-a-day: Model Solutions**

## 1 Lines of symmetry

Write down the number of lines of symmetry of
(a) a regular hexagon
(b) a scalene triangle

(a) A regular hexagon has 6 lines of symmetry
(b) A scalene triangle has 0 lines of symmetry
**Answer: (a) 6 (b) 0**

## 2 Tally charts

The tally chart shows the favourite colour of some children.
Work out the total number of children.

Red 10, Green 5, Blue 7
10 + 5 + 7 = 22
**Answer: 22**

## 3 Substitution

Work out the value of 3 + y when y = 2.

3 + 2 = 5
**Answer: 5**

## 4 Angles in a triangle

The diagram shows a triangle.
Work out the size of angle a.
The diagram is not drawn accurately.

Angles in a triangle add up to 180°
55 + 70 = 125
180 − 125 = 55
**Answer: a = 55°**

## 5 Money: saving

Isla wants to buy a game for £18.
Isla has saved £12.
How much more does Isla need?

£18 − £12 = £6
**Answer: £6**

## 6 Writing expressions

Simplify q × m

Write the number first, then the letters in alphabetical order, with no × signs
**Answer: mq**

## 7 Reflection on a grid

The point P is drawn on the grid.
P is reflected in the line y = 3.
Write down the coordinates of the image of P.

P is (1, 1)
P is 2 squares below the line, so the image is 2 squares above
y-coordinate: 3 + 2 = 5
**Answer: (1, 5)**

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## 8 Ratio, finding the other part

At a rescue centre, the ratio of cats to dogs is 3 : 2.
There are 18 cats.
Work out the number of dogs.

18 ÷ 3 = 6 for each part
2 × 6 = 12
**Answer: 12**

## 9 24-hour clock

Write 5:00 am using the 24-hour clock.

am times stay the same, with a zero in front if needed
05:00
**Answer: 05:00**

## 10 The nth term

The nth term of a sequence is n + 3.
Write down the first three terms of the sequence.

Put n = 1, 2, 3 into n + 3
1 + 3 = 4, 2 + 3 = 5, 3 + 3 = 6
**Answer: 4, 5, 6**