Day 99 **C Tier 10-a-day: Model Solutions**

1 Angles on a straight line

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

Angles on a straight line add up to 180°
180 − 50 = 130
Answer: a = 130°

2 Multiples

Write down the first four multiples of 5.

Multiples are the 5 times table
Answer: 5, 10, 15, 20

3 Solving equations

Solve 5d = 15

5d means 5 × d, so divide both sides by 5
d = 15 ÷ 5 = 3
Answer: d = 3

4 Money: totals

Maya buys tea and biscuits.
Tea costs 65p.
Biscuits costs £1.60.
Work out the total cost.

65p + £1.60
65p + 160p = 225p = £2.25
Answer: £2.25

5 Average speed

A cyclist travels 240 km in 4 hours.
Work out its average speed.

Speed = distance ÷ time
240 ÷ 4 = 60
Answer: 60 km/h

6 Reflecting a point

The point P has coordinates (2, −6).
P is reflected in the line x = 4.
Write down the coordinates of the image of P.

The point is 2 from the line, so the image is 2 on the other side: 4 + 2 = 6
Answer: (6, −6)

7 Travel graphs

The graph shows a journey. A bus travels from home to a shop and then back home.
(a) After how many hours did the journey start back home?
(b) How long did the journey home take?

(a) The line starts to go down at 3 hours
(b) 4 − 3 = 1
Answer: (a) 3 hours (b) 1 hour

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8 Equations of lines

A straight line passes through the points
(1, 0), (1, 3), (1, 8)
Write down the equation of the line.

Every point has x-coordinate 1, so the line is vertical
Answer: x = 1

9 Division in context

Each van holds 25 people.
92 people need a lift.
How many vans are needed?

92 ÷ 25 = 3 remainder 17
The extra people need another van
Answer: 4

10 Cost from area

A rectangular lawn is 4 m long and 2 m wide.
Turf costs £8 per m^2.
Work out the cost of covering the lawn.

Area = 4 × 2 = 8 m^2
Cost = 8 × £8 = £64
Answer: £64