**Day 59** **C Tier 10-a-day: Model Solutions**

## 1 Radius and diameter

The radius of a plate is 2 mm.
Work out the diameter.

The diameter is twice the radius
2 × 2 = 4
**Answer: 4 mm**

## 2 Tally charts

The tally chart shows the types of film some people watched.
How many more people for Action than for Drama?

Action: 14 Drama: 9
14 − 9 = 5
**Answer: 5**

## 3 Number sequences

Here is a number sequence.
33, 28, 23, 18, ...
Write down the next two numbers.

The sequence goes down by 5 each time
18 − 5 = 13, 13 − 5 = 8
**Answer: 13, 8**

## 4 Sequences

Here is a sequence with one number missing.
19, 24, 29, ?, 39
Work out the missing number.

The terms go up by 5 each time
29 + 5 = 34
**Answer: 34**

## 5 Money: wages

Dan earns £8 for each hour of work.
Dan works for 7 hours.
How much does Dan earn?

£8 × 7 = £56
**Answer: £56**

## 6 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 (2, 1)
P is 2 squares below the line, so the image is 2 squares above
y-coordinate: 3 + 2 = 5
**Answer: (2, 5)**

## 7 Reading straight line graphs

The graph shows the cost of printing photos.
(a) Work out the cost of printing 3 photos.
(b) Ali spends £16 printing photos. How many photos does Ali print?

(a) Go up from 3 on the bottom axis to the line, then across: £12
(b) Go across from 16 on the cost axis to the line, then down: 4
**Answer: (a) £12 (b) 4**

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## 8 Expected number

A spinner lands on blue with probability $\frac{1}{5}$.

It is spun 10 times.

How many times would you expect it to land on blue?

Expected number = probability × number of trials

$\frac{1}{5} \times 10 = 2$

**Answer: 2**

## 9 Angles between clock hands

The minute hand of a clock turns clockwise from the 11 to the 1.

Through what angle does it turn?

Each number gap on a clock is $360 \div 12 = 30°$

From 11 to 1 is 2 gaps

$2 \times 30 = 60$

**Answer: 60°**

## 10 Fractions of a group

Sam answers 18 questions and gets 12 correct.

What fraction of the questions did Sam get correct? Give your answer in its simplest form.

$\frac{12}{18}$

Divide top and bottom by 6: $\frac{2}{3}$

**Answer: $\frac{2}{3}$**