Day 364 **C Tier 10-a-day: Model Solutions**

1 Function machines

Here is a function machine.
Work out the output when the input is 9.

9 × 6 = 54
54 + 13 = 67
Answer: 67

2 Reading a pie chart

36 students were asked about their favourite fruit.
The pie chart shows the results.
How many students chose Pear?

The Pear sector is a quarter of the pie chart
36 ÷ 4 = 9
Answer: 9

3 Lines of symmetry

Write down the number of lines of symmetry of
(a) a kite
(b) a regular octagon

(a) A kite has 1 line of symmetry
(b) A regular octagon has 8 lines of symmetry
Answer: (a) 1 (b) 8

4 Rounding money

Round £1.95 to the nearest pound.

Look at the pence: 95 p
50p or more, so round up
Answer: £2

5 Formulae in words

Here is a rule to work out the fare for a taxi journey.
Fare (£) = 4 × number of miles + 15
Work out the fare for a journey of 3 miles.

Fare (£) = 4 × 3 + 15
= 12 + 15 = 27
Answer: £27

6 Time

A bus journey starts at 3:00 pm.
It lasts for 1 hour 15 minutes.
At what time does it finish?

3:00 pm + 1 hour = 4:00 pm
4:00 pm + 15 minutes = 4:15 pm
Answer: 4:15 pm

7 Sampling

Chloe wants to find out how many people eat fast food.
Chloe asks people outside a fast food restaurant.
Give a reason why this sample may be biased.

They are more likely to eat fast food than other people
Answer: They are more likely to eat fast food than other people

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8 Division in context

Each coach holds 20 people.
47 people need a lift.
How many coaches are needed?

47 ÷ 20 = 2 remainder 7
The extra people need another coach
Answer: 3

9 Venn diagrams

Some students were asked whether they like maths or science.
The Venn diagram shows the results.
How many students like maths?

Add the number in the maths circle: 7 + 4 = 11
Answer: 11

10 Angles in a right angle

A right angle is split into two angles by a line.
Work out the size of angle y.
The diagram is not drawn accurately.

The square corner is a right angle, which is 90°
90 − 30 = 60
Answer: y = 60°