Day 353 **C Tier 10-a-day: Model Solutions**

1 Types of triangle

A triangle has angles of 90°, 40° and 50°.
What type of triangle is it?
Choose from: equilateral, isosceles, right-angled.

One of the angles is 90°
Answer: right-angled

2 The mean

Here are the shoe sizes of some students.
6 4 6 4
Work out the mean.

Add up the values: 6 + 4 + 6 + 4 = 20
Divide by 4: 20 ÷ 4 = 5
Answer: 5

3 Substitution

Work out the value of 2 + p when p = 7.

2 + 7 = 9
Answer: 9

4 Expected number

A spinner lands on blue with probability $\frac{3}{4}$.

It is spun 12 times.
How many times would you expect it to land on blue?

Expected number = probability × number of trials
$\frac{3}{4} \times 12 = 9$
Answer: 9

5 Finish time

A swimming session starts at 3:15 pm.
It lasts 1 hour 55 minutes.
At what time does it end?

Add the hours: 3:15 pm + 1 hour = 4:15 pm
Add the minutes: 4:15 pm + 55 minutes = 5:10 pm
Answer: 5:10 pm

6 Time

A football match starts at 7:50 pm.
It finishes at 11:20 pm.
How long does it last?

7:50 pm to 8:00 pm is 10 minutes
8:00 pm to 11:00 pm is 3 hours
11:00 pm to 11:20 pm is 20 minutes
Add the parts together
Answer: 3 hours 30 minutes

7 Missing side from area

A rectangle has an area of 20 m^2.
Its width is 4 m.
Work out its length.

Area = length × width
20 = length × 4
length = 20 ÷ 4 = 5
Answer: 5 m

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8 Timetables

The table shows the times of two buses.
Jo gets on Bus 2 at School.
What time does Jo get to Hospital?

Read along the row for Hospital in the Bus 2 column
Answer: 11:20

9 Coordinates

ABCD is a rectangle.
A is the point (8, 8), B is the point (1, 8) and C is the point (1, 4).
Write down the coordinates of D.

AB is horizontal so D has the same x-coordinate as A: 8
BC is vertical so D has the same y-coordinate as C: 4
Answer: (8, 4)

10 Order of operations

Work out 9 × (5 + 4).

Brackets first
5 + 4 = 9
9 × 9 = 81
Answer: 81