Day 142 **C Tier 10-a-day: Model Solutions**

1 Division

Work out 198 ÷ 9.

9 × 22 = 198
So 198 ÷ 9 = 22
Answer: 22

2 Pay rates

Isla is paid £7 for each hour of work.
Isla works for 7 hours.
How much is Isla paid?

£7 × 7 = £49
Answer: £49

3 Solving equations

Solve t − 4 = 9

Add 4 to both sides
t = 9 + 4 = 13
Answer: t = 13

4 Perimeter of a regular polygon

The perimeter of a regular octagon is 96 mm.
Work out the length of one side.

A regular octagon has 8 equal sides
96 ÷ 8 = 12
Answer: 12 mm

5 Function machines

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

9 × 2 = 18
18 + 9 = 27
Answer: 27

6 Money: saving

Nina saves £4 each week.
How many weeks does it take to save £36?

£36 ÷ £4 = 9
Answer: 9 weeks

7 Relative frequency

A biased dice is rolled 50 times. It lands on a six 13 times.
Estimate the probability that it lands on a six next time.
Give your answer as a decimal.

Relative frequency = $\frac{13}{50}$

13 ÷ 50 = 0.26
Answer: 0.26

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8 Bearings from compass points

Bearings are measured clockwise from north.
Write down the three-figure bearing of
(a) west
(b) south-east

North is 000°. Each compass point to the right (clockwise) is a further 45°.
(a) west is 270°
(b) south-east is 135°
Answer: (a) 270° (b) 135°

9 Estimation

Estimate the value of 71 + 69 by rounding each number to the nearest 10.

71 rounds to 70 and 69 rounds to 70
70 + 70 = 140
Answer: 140

10 Pie chart angles

120 students were asked about their way of travelling to school.
3 of them walk to school.
The results are shown in a pie chart.
Work out the angle of the sector for those students.

360° ÷ 120 = 3° for each student
3 × 3° = 9°
Answer: 9°