Day 345 **C Tier 10-a-day: Model Solutions**

1 Substitution

Work out the value of 5z when z = 6.

5z means 5 × z
5 × 6 = 30
Answer: 30

2 Cost of one item

4 tickets cost £2.20.
Work out the cost of one ticket.

220p ÷ 4 = 55p
Answer: 55p

3 Choosing units

Which unit is best for measuring the width of a book?
Choose from: mm, cm, m, km

A book is about 20 centimetres wide
So the best unit is cm
Answer: cm

4 Distance from speed and time

A car travels at 80 mph for 1½ hours.
How far does it travel?

Distance = speed × time
80 × 1.5 = 120
Answer: 120 miles

5 Solving equations

Solve $\frac{h}{3} = 9$

$\frac{h}{3}$ means h ÷ 3, so multiply both sides by 3
h = 9 × 3 = 27
Answer: h = 27

6 Angles in parallel lines

Two parallel lines are crossed by a straight line.
Work out the size of angle q.
Give a reason for your answer.

The angles are in matching positions, so they are corresponding angles
Corresponding angles are equal
q = 115°
Answer: q = 115° (corresponding angles)

7 Currency conversion

£1 = €1.25
Change £20 into euros.

£20 × 1.25 = €25
Answer: €25

8 Metric units

Change 4 litres to millilitres.

1 litre = 1000 ml
4 × 1000 = 4000
Answer: 4000 ml

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9 Cost from perimeter

A rectangular play area is 12 m long and 8 m wide.
Fencing costs £5 per metre.
Work out the cost of putting fence all the way round the play area.

Perimeter = 12 + 8 + 12 + 8 = 40 m
Cost = 40 × £5 = £200
Answer: £200

10 Negative numbers

Work out 7 − 9.

Use a number line
7 − 9 = −2
Answer: −2