Day 275 **C Tier 10-a-day: Model Solutions**

1 Even and odd numbers

Write down all the odd numbers in this list.
78, 30, 29, 47, 41

Odd numbers end in 1, 3, 5, 7 or 9
Answer: 29, 47, 41

2 Solving equations

Solve w + 6 = 9

Subtract 6 from both sides
w = 9 − 6 = 3
Answer: w = 3

3 Units of time

How many months are there in 6 years?

1 year = 12 months
6 × 12 = 72
Answer: 72

4 Using formulae

The cost, C pounds, of n tickets is given by the formula C = 9n.
(a) Work out the value of C when n = 3.
(b) Work out the value of n when C = 81.

(a) C = 9 × 3 = 27
(b) 9n = 81, so n = 81 ÷ 9 = 9
Answer: (a) C = 27 (b) n = 9

5 Line graphs

The line graph shows the depth of water in a tank at different times.
Write down the depth of water at 2 pm.

Go up from 2 pm to the line, then across to the scale: 4 cm
Answer: 4 cm

6 Powers

Work out $5^2 + 5$.

$5^2 = 25$
25 + 5 = 30
Answer: 30

7 Best buys

Pens are sold in two packs.
Pack A has 3 and costs 30p.
Pack B has 4 and costs 60p.
Which pack is better value?

Pack A: 30p ÷ 3 = 10p each
Pack B: 60p ÷ 4 = 15p each
Pack A is cheaper per item
Answer: Pack A

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8 Shaded area

The diagram shows a rectangle with a smaller rectangle cut out of it.
Work out the area of the shaded part.
The diagram is not drawn accurately.

Big rectangle: 11 × 8 = 88
Small rectangle: 5 × 4 = 20
Shaded area: 88 − 20 = 68

Answer: 68 cm^2

9 Coordinates

ABCD is a rectangle.
A is the point (6, 0), B is the point (9, 0) and C is the point (9, 3).
Write down the coordinates of D.

AB is horizontal so D has the same x-coordinate as A: 6
BC is vertical so D has the same y-coordinate as C: 3

Answer: (6, 3)

10 Perimeter of a square from its area

A square field has an area of 81 m^2.
Work out the perimeter of the field.

Side × side = 81, so the side is 9 m (because 9 × 9 = 81)
Perimeter = 4 × 9 = 36

Answer: 36 m