Day 220 **C Tier 10-a-day: Model Solutions**

1 Time conversions

Change 4 days into hours.

1 days = 24 hours, so multiply by 24: 4 × 24 = 96

Answer: 96 hours

2 Collecting like terms

Simplify 7k − 6k

All the terms are in k, so just add or subtract the numbers in front of k

Answer: k

3 Angles on a straight line

The diagram shows a straight line.
Work out the size of angle b.
The diagram is not drawn accurately.

Angles on a straight line add up to 180°
40 + 100 = 140
180 − 140 = 40

Answer: b = 40°

4 Ordering decimals

Write these numbers in order, starting with the smallest.
0.2, 0.15, 0.3, 0.21

Write each with the same number of decimal places
0.15, 0.20, 0.21, 0.30

Answer: 0.15, 0.2, 0.21, 0.3

5 Timetables

The table shows part of a bus timetable.
How long does Bus 3 take to travel from Museum to Airport?

Leaves Museum at 09:10 and arrives at Airport at 09:25
From 09:10 to 09:25 is 15 minutes

Answer: 15 minutes

6 Reading straight line graphs

The graph shows the cost of printing photos.
(a) Work out the cost of printing 3 photos.
(b) Max spends £60 printing photos. How many photos does Max print?

(a) Go up from 3 on the bottom axis to the line, then across: £40
(b) Go across from 60 on the cost axis to the line, then down: 5

Answer: (a) £40 (b) 5

7 Missing side from area

A rectangular wall has an area of 20 cm^2.
Its width is 4 cm.
Work out its length.

Area = length × width
20 = length × 4
length = 20 ÷ 4 = 5

Answer: 5 cm

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8 Division with remainders

59 stickers are shared equally between 6 children.
(a) How many does each child get?
(b) How many are left over?

59 ÷ 6 = 9 remainder 5
Answer: (a) 9 (b) 5

9 Substitution

Work out the value of 5(b + 8) when b = 3.

Brackets first: 3 + 8 = 11
5 × 11 = 55
Answer: 55

10 Pie chart angles

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

360° ÷ 45 = 8° for each student
6 × 8° = 48°
Answer: 48°