Day 24 **C Tier 10-a-day: Model Solutions**

1 Cost of several items

A ticket costs 88p.
Work out the cost of 7 tickets.
Give your answer in pounds.

88p × 7 = 616p
616p = £6.16
Answer: £6.16

2 Reading a scale

The diagram shows part of a measuring scale.
Write down the reading shown by the arrow.

The labelled marks go up in 50. There are 5 small steps between labelled marks, so each small step is 50 ÷ 5 = 10.
The arrow is 3 small steps after 50.
50 + 3 × 10 = 80
Answer: 80 ml

3 Subtracting decimals

Work out 9.7 − 6.9.

Line up the decimal points
9.7 − 6.9 = 2.8
Answer: 2.8

4 Vertically opposite angles

The diagram shows two straight lines crossing.
(a) Work out the size of angle y.
(b) Work out the size of angle a.
The diagram is not drawn accurately.

(a) Vertically opposite angles are equal
y = 115°
(b) Angles on a straight line add up to 180°
180 − 115 = 65
Answer: (a) y = 115° (b) a = 65°

5 Prime numbers

Write down the prime number in this list.
25, 21, 31, 15

A prime number has exactly two factors, 1 and itself
25 = 5 × 5
21 = 3 × 7
15 = 3 × 5
Answer: 31

6 Reading a pie chart

56 students were asked about their ways of travelling to school.
The pie chart shows the results.
How many students chose Bike?

The Bike sector is a quarter of the pie chart
56 ÷ 4 = 14
Answer: 14

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7 Cost from area

A rectangular hall floor is 3 m long and 4 m wide.
Flooring costs £10 per m^2.
Work out the cost of covering the hall floor.

Area = 3 × 4 = 12 m^2
Cost = 12 × £10 = £120
Answer: £120

8 Coordinates

ABCD is a rectangle.
A is the point (2, 5), B is the point (7, 5) and C is the point (7, 0).
Write down the coordinates of D.

AB is horizontal so D has the same x-coordinate as A: 2
BC is vertical so D has the same y-coordinate as C: 0
Answer: (2, 0)

9 Probability of not getting a colour

A bag contains 7 blue marbles, 4 red marbles and 1 yellow marbles.
One is taken at random.
Write down the probability that it is not red.

Number that are not red: 7 + 1 = 8
Total: 12
Probability = $\frac{8}{12} = \frac{2}{3}$
Answer: $\frac{2}{3}$

10 Substitution

Work out the value of $y^2 + 4$ when y = 7.

$y^2 = 7 \times 7 = 49$
49 + 4 = 53
Answer: 53