Day 82 **C Tier 10-a-day: Model Solutions**

1 Probability words

Choose a word from the list to describe the probability of the event.
A fair coin is flipped. It lands on heads.
impossible, unlikely, even chance, likely, certain

Heads and tails are equally likely
So the event is even chance
Answer: even chance

2 Money

A notebook costs 41p.
Work out the cost of 3 notebooks.
Give your answer in pounds.

41p × 3 = 123p
123p = £1.23
Answer: £1.23

3 Angles round a point

The diagram shows 3 angles round a point.
Work out the size of angle p.
The diagram is not drawn accurately.

Angles round a point add up to 360°
150 + 135 = 285
360 − 285 = 75
Answer: p = 75°

4 Map scales

On a map, 1 cm represents 50 km.
Two towns are 2 cm apart on the map.
Work out the real distance between the towns.

2 × 50 = 100
Answer: 100 km

5 Sequences

Here are the first four terms of a sequence.
44, 38, 32, 26
(a) Write down the next term.
(b) Write down the rule for finding the next term.

(a) The terms go down by 6 each time
Next term = 20
(b) Subtract 6 each time
Answer: (a) 20 (b) Subtract 6

6 Isosceles triangles

The diagram shows an isosceles triangle.
Work out the size of angle y.
The diagram is not drawn accurately.

The triangle is isosceles, so the two base angles are both 60°
60 + 60 = 120
180 − 120 = 60
Answer: y = 60°

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7 Division with remainders

29 marbles are shared equally between 7 children.
(a) How many does each child get?
(b) How many are left over?

29 ÷ 7 = 4 remainder 1
Answer: (a) 4 (b) 1

8 Function machines

Here is a function machine.
The output is 16.
Work out the input.

Work backwards using the opposite operations
16 − 14 = 2
2 + 10 = 12
Answer: 12

9 Order of operations

Work out 5 × 3 + 6.

Multiply first
5 × 3 = 15
15 + 6 = 21
Answer: 21

10 Angles between clock hands

Work out the smaller angle between the hour hand and the minute hand of a clock at 5 o'clock.

There are 12 hours round a clock, so each hour is 360 ÷ 12 = 30°
At 5 o'clock the hands are 5 hours apart (going the short way: 5)
5 × 30 = 150
Answer: 150°