Day 197 **C Tier 10-a-day: Model Solutions**

1 Solving equations

Solve 6n = 48

6n means 6 × n, so divide both sides by 6
n = 48 ÷ 6 = 8
Answer: n = 8

2 Reading a straight-line graph

The graph shows the cost of apples.
Use the graph to find how many kg of apples can be bought for £24.

Go across from £24 on the vertical axis to the line, then down
Amount = 6 kg
Answer: 6 kg

3 Perimeter and area of a square

A square has sides of length 12 m.
(a) Work out its perimeter.
(b) Work out its area.

(a) A square has 4 equal sides: 4 × 12 = 48
(b) Area = side × side: 12 × 12 = 144
Answer: (a) 48 m (b) 144 m^2

4 Probability with dice

A fair six-sided dice is rolled.
Write down the probability of rolling
(a) a 6
(b) a multiple of 3

(a) 1 out of 6 numbers: $\frac{1}{6}$

(b) 2 out of 6 numbers: $\frac{2}{6} = \frac{1}{3}$

Answer: (a) $\frac{1}{6}$ (b) $\frac{1}{3}$

5 Substitution

Work out the value of 5d + 7 when d = 5.

5d = 5 × 5 = 25
25 + 7 = 32
Answer: 32

6 Area of a triangle

The diagram shows a triangle.
Work out the area of the triangle.
The diagram is not drawn accurately.

Area of a triangle = base × height ÷ 2
14 × 10 = 140
140 ÷ 2 = 70
Answer: 70 cm^2

7 Division with remainders

18 marbles are shared equally between 5 children.
(a) How many does each child get?
(b) How many are left over?

18 ÷ 5 = 3 remainder 3
Answer: (a) 3 (b) 3

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8 The nth term

The nth term of a sequence is n + 9.
Work out the 6th term of the sequence.

Put n = 6 into n + 9
6 + 9 = 15
Answer: 15

9 Order of operations

Work out 2 × (8 + 2).

Brackets first
8 + 2 = 10
2 × 10 = 20
Answer: 20

10 Stem and leaf diagrams

The stem and leaf diagram shows the lengths, in cm, of pieces of ribbon.
Work out the range.

Largest = 58, smallest = 31
58 − 31 = 27
Answer: 27