Day 329 **C Tier 10-a-day: Model Solutions**

1 Radius and diameter

The diameter of a round table is 32 cm.
Work out the radius.

The radius is half the diameter
32 ÷ 2 = 16
Answer: 16 cm

2 The median

Here are the numbers of books read by some students.
10 11 7 11 10 6 12 10 2
Work out the median.

Put the numbers in order: 2 6 7 10 10 10 11 11 12
The middle number is 10
Answer: 10

3 Substitution

Work out the value of 6 + m when m = 10.

6 + 10 = 16
Answer: 16

4 The median of an even number of values

Here are the ages of some children.
12 8 12 8 9 11
Work out the median.

Put the numbers in order: 8 8 9 11 12 12
The middle two numbers are 9 and 11
Halfway between them: (9 + 11) ÷ 2 = 10
Answer: 10

5 Sequences

Here are the first four terms of a sequence.
38, 34, 30, 26
(a) Write down the next term.
(b) Write down the rule for finding the next term.

(a) The terms go down by 4 each time
Next term = 22
(b) Subtract 4 each time
Answer: (a) 22 (b) Subtract 4

6 Best buys

Eggs are sold in two packs.
Pack A has 8 and costs £1.20.
Pack B has 2 and costs 20p.
Which pack is better value?

Pack A: 120p ÷ 8 = 15p each
Pack B: 20p ÷ 2 = 10p each
Pack B is cheaper per item
Answer: Pack B

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7 Expressions for perimeter

A rectangle has length c cm and width 4 cm.
Write an expression for the perimeter of the shape.
Give your answer in its simplest form.

Perimeter = c + 4 + c + 4
= 2c + 8
Answer: 2c + 8 cm

8 Multiplying multiples of 10

Work out 600 × 6.

Work out 6 × 6 = 36
Then put the zeros back on
Answer: 3600

9 Perimeter from area

A rectangular garden has an area of 70 cm^2.
Its width is 7 cm.
Work out the perimeter of the garden.

Length = area ÷ width = 70 ÷ 7 = 10
Perimeter = 10 + 7 + 10 + 7 = 34
Answer: 34 cm

10 Multiples: smallest common

Find the smallest number that is a multiple of both 3 and 7.

Multiples of 3: 3, 6, 9, 12, 15, 18, 21
Multiples of 7: 7, 14, 21
21 is in both lists
Answer: 21