**Day 33** **C Tier 10-a-day: Model Solutions**

## 1 Cost of several items

A bun costs 43p.
Work out the cost of 3 buns.
Give your answer in pounds.

43p × 3 = 129p
129p = £1.29
**Answer: £1.29**

## 2 Choosing units

Which unit is best for measuring the mass of a bag of potatoes?
Choose from: g, kg, tonnes

A bag of potatoes is about 2 kilograms
So the best unit is kg
**Answer: kg**

## 3 The nth term

The nth term of a sequence is 6n.
Work out the 10th term of the sequence.

Put n = 10 into 6n
6 × 10 = 60
**Answer: 60**

## 4 Probabilities add up to 1

A bag has four colours.
The table shows the probability of each colour.
The probabilities add up to 1.
Work out the missing probability.

Add the known probabilities: 0.15 + 0.4 + 0.25 = 0.8
1 − 0.8 = 0.2
**Answer: 0.2**

## 5 Rounding decimals

Round 3.51 to 1 decimal place.

Look at the second decimal digit, which is 1
1 is less than 5, so round down
**Answer: 3.5**

## 6 Best buys

Tins of beans are sold in two packs.
Pack A has 5 and costs £2.00.
Pack B has 12 and costs £6.00.
Which pack is better value?

Pack A: 200p ÷ 5 = 40p each
Pack B: 600p ÷ 12 = 50p each
Pack A is cheaper per item
**Answer: Pack A**

## 7 Function machines

Here is a function machine.
The output is 18.
Work out the input.

Work backwards using the opposite operations
18 − 15 = 3
3 + 2 = 5
**Answer: 5**

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## 8 Angles between clock hands

Work out the smaller angle between the hour hand and the minute hand of a clock at 8 o'clock.

There are 12 hours round a clock, so each hour is 360 ÷ 12 = 30°
At 8 o'clock the hands are 8 hours apart (going the short way: 4)
4 × 30 = 120
**Answer: 120°**

## 9 Multiples: smallest common

Find the smallest number that is a multiple of both 2 and 3.

Multiples of 2: 2, 4, 6
Multiples of 3: 3, 6
6 is in both lists
**Answer: 6**

## 10 Substitution

Work out the value of a − 6 when a = −5.

−5 − 6 = −11
**Answer: −11**