1

A rectangular garden allotment is 15 m long and 8 m wide. The allotment owners have decided to cover the allotment with a layer of topsoil to improve the growing conditions.

The topsoil is to be 10 cm deep. The owners originally ordered 15 m^3 of topsoil, but later realised they had made an error in their calculations.

What volume of topsoil do they actually need to cover the allotment to the desired depth?

A 12 m^3 **B** 1.2 m^3 **C** 120 m^3 **D** 15 m^3

1

2

A local taxi company charges a fixed booking fee plus a per-mile rate for their journeys. The total fare, in pounds, is calculated using the formula: F = 2.5M + 3.5, where M is the number of miles travelled.

If Emily takes a taxi and travels for 8 miles, how much will her total fare be?

A £23.50   **B** £20.00   **C** £27.00   **D** £19.50

1

3

A train departs from London at 10:30 am and travels at a constant speed towards Edinburgh.

The journey takes 4 hours and 20 minutes.

At what time will the train be three-fifths of the way to Edinburgh?

A 12:42 pm   **B** 1:06 pm   **C** 12:18 pm   **D** 1:30 pm

1

4

Liam is measuring the length of two pieces of wood in his workshop.

The first piece measures 3.27 metres and the second piece measures 2.41 metres.

What is the total length of the two pieces of wood when placed end-to-end?

A 5.68 metres   **B** 5.78 metres   **C** 6.68 metres   **D** 5.59 metres

1

5

Amelia is making sandwiches for a school picnic.

Each sandwich requires 2 slices of bread and 1 slice of cheese.

If Amelia has 84 slices of bread, how many slices of cheese does she need to make as many sandwiches as possible?

A 42   **B** 21   **C** 168   **D** 28

1

6 A ship is currently located at coordinates (2, 5) on a navigation map.

The ship moves 7 units north and 6 units to the west.

What are the new coordinates of the ship after this movement?

A (8, 12)　　　　**B** (−4, 10)　　　　**C** (−4, 5)　　　　**D** (−4, 12)

1

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7 In a calculation, 0.56 is multiplied by 100.

Which of the following represents the same calculation, but written using division instead?

A 5 600 ÷ 10　　**B** 5 600 ÷ 100　　**C** 5 600 ÷ 1 000　　**D** 5 600 ÷ 10 000

1

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8 The cost (P) in pounds of a plumber's callout charge for labour is calculated based on the number of minutes (m) they are at the property, using the formula: $P = 50 + 0.5m$.

What would be the total callout charge if a plumber was at a property for 24 minutes?

A £62　　　　**B** £74　　　　**C** £12　　　　**D** £38

1

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9 Four friends are saving up their pocket money to buy a new video game.

They have saved the following amounts: £12, £15, £9, and £14.

What is the average amount of money they have saved?

A £12.50　　　　**B** £13.00　　　　**C** £11.50　　　　**D** £14.00

1

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10 In a school, there are 1 200 students in Year 7.

Year 8 has half as many students as Year 7.

Year 9 has 5 times more students than Year 8.

How many students are in Year 9?

A 3 000　　　　**B** 600　　　　**C** 6 000　　　　**D** 12 000

1