

## GCSE QUESTIONS WITH CLUES

**Q1. NON-CALCULATOR**

Write 180 minutes in hours.

$$\overset{\curvearrowright}{60 \text{ minutes} = 1 \text{ hour}}$$

$$180 \text{ minutes} = \div 60$$

..... hours

(Total for question = 1 mark)

**Q2. NON-CALCULATOR**

Work out the difference, in minutes, between 1 hour 25 minutes and  $1\frac{1}{4}$  hours.

$$1\frac{1}{4} \text{ hours} = 1 \text{h } 15 \text{m}$$

..... minutes

(Total for question = 2 marks)

**Q3. NON-CALCULATOR**

Change 530 centimetres into metres.

$$\overset{\div 100}{100 \text{ cm} = 1 \text{ m}}$$

$$530 \text{ cm} = \div 100$$

..... metres

(Total for question is 1 mark)

**Q4. NON-CALCULATOR**

(a) Change 365 cm into metres.

$$\overset{\div 100}{100 \text{ cm} = 1 \text{ m}}$$

$$365 \text{ cm} = \div 100$$

..... m

(1)

(b) Change 2.7 kg into grams.

$$\overset{\times 1000}{1000 \text{ g} = 1 \text{ kg}}$$

$$= 2.7 \text{ kg} \times 1000$$

..... g

(1)

(Total for question = 2 marks)

**Q5. NON-CALCULATOR**

The length of a line is x centimetres.

Write down an expression, in terms of x, for the length of the line in millimetres.

$$\overset{\times 10}{10 \text{ mm} = 1 \text{ cm}}$$

$$= x \text{ cm} \times 10$$

.....

(Total for question = 1 mark)

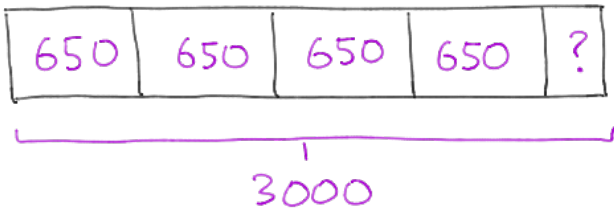
**Q6. NON-CALCULATOR**

Prasha has five blocks of wood.

3000g

The total weight of all five blocks of wood is 3 kilograms.  
4 of the blocks of wood each have a weight of 650 grams.

Work out the weight, in grams, of the other block of wood.



..... grams

(Total for question = 3 marks)

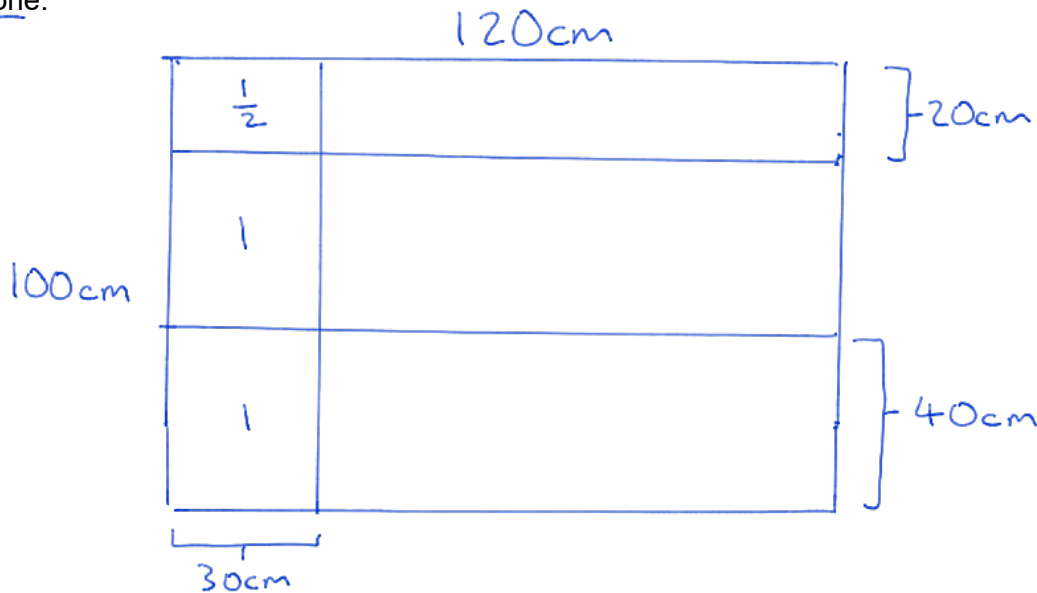
**Q7. NON-CALCULATOR**

Carpet tiles are going to be used to cover a floor.

120cm by 100cm

The floor is a 1200mm by 1000mm rectangle.  
 Each carpet tile is a 40cm by 30cm rectangle.

Exactly 10 carpet tiles can be used to cover the floor completely. Show in a labelled sketch how this can be done.



(Total for question = 3 marks)

**Q8. NON-CALCULATOR**

An American airline has a maximum size for bags on its planes.  
The diagram shows the maximum dimensions.

Chris has a bag.

It has

- height 50 cm
- width 40 cm
- depth 20 cm

1 inch = 2.54 cm



Can Chris take this bag on the plane? You must show your working.

<p>Max Height</p> $22 \times 2.54$ $\begin{array}{r} 254 \\ \times 22 \\ \hline \end{array}$	<p>Max Width</p> $14 \times 2.54$ $\begin{array}{r} 254 \\ \times 14 \\ \hline \end{array}$	<p>Max Depth</p> $9 \times 2.54$ $\begin{array}{r} 254 \\ \times 9 \\ \hline \end{array}$
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(Total for question is 3 marks)

**Q9. NON-CALCULATOR**

A car travels for 18 minutes at an average speed of 72 km/h.

(a) How far will the car travel in these 18 minutes?

$$\begin{aligned}
 D &= S \times T \\
 &= 72 \times \frac{18}{60} \div 6 \\
 &= 72 \times \frac{3}{10}
 \end{aligned}$$

..... km  
(2)

David says,

"72 kilometres per hour is faster than 20 metres per second."

(b) Is David correct? You must show how you get your answer.

$$\begin{aligned}
 &20 \text{ m/s} \\
 &= 1200 \text{ m/min} \quad \downarrow \times 60 \\
 &= \text{ km/min} \quad \downarrow \div 1000 \\
 &= \text{ km/hr} \quad \downarrow \times 60
 \end{aligned}$$

(2)  
(Total for question = 4 marks)