

# Edexcel GCSE

## Mathematics (Linear) – 1MA0

# SURFACE AREA

### Materials required for examination

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.  
Tracing paper may be used.

### Items included with question papers

Nil



### Instructions

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Use black ink or ball-point pen.

Fill in the boxes at the top of this page with your name, centre number and candidate number.

Answer all questions.

Answer the questions in the spaces provided – there may be more space than you need.

Calculators may be used.

### Information

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The marks for each question are shown in brackets – use this as a guide as to how much time to spend on **each** question.

Questions labelled with an **asterisk (\*)** are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

### Advice

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Read each question carefully before you start to answer it.

Keep an eye on the time.

Try to answer every question.

Check your answers if you have time at the end.

1. The diagram shows a cuboid of dimensions 10cm × 8cm × 5cm.

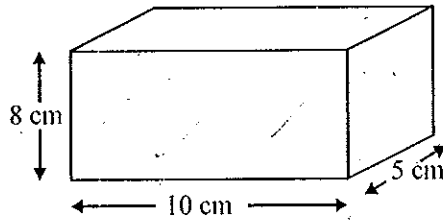


Diagram **NOT** accurately drawn

Work out the total surface area of the cuboid.

State the units with your answer.

Front	80
Back	80
Side	40
Side	40
Top	50
Bottom	50
	340 cm <sup>2</sup>

.....340 cm<sup>2</sup>.....

(Total 4 marks)

2. The diagram shows a solid cuboid which is 5 cm by 4 cm by 3 cm.

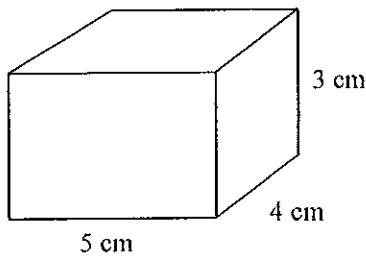


Diagram **NOT** accurately drawn

What is the total surface area of this cuboid?

State the units with your answer.

Front	15
Back	15
Side	12
side	12
Top	20
Bottom	20
	94 cm <sup>2</sup>

.....94 cm<sup>2</sup>.....

(Total 4 marks)

3. Here is a cuboid.

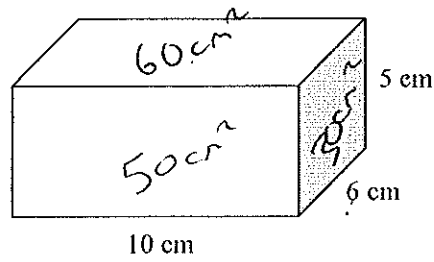


Diagram NOT accurately drawn

What is the total surface area of the cuboid?

State the units with your answer.

$$\dots\dots\dots 280 \text{ cm}^2$$

(Total 4 marks)

4.

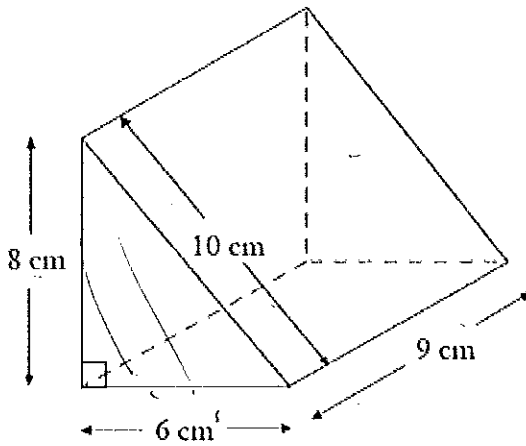


Diagram NOT accurately drawn

Work out the surface area of the triangular prism.

State the units with your answer.

$$\begin{aligned} 8 \times 6 &= 48 \\ 10 \times 9 &= 90 \\ 6 \times 9 &= 54 \\ 8 \times 9 &= 72 \\ \hline 264 \end{aligned}$$

$$\dots\dots\dots 264 \text{ cm}^2$$

(Total 4 marks)

5.

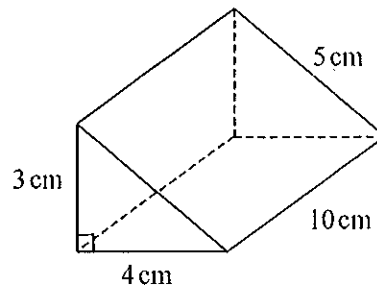
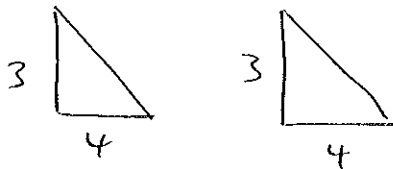


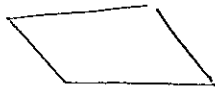
Diagram **NOT** accurately drawn

What is the total surface area of the triangular prism?

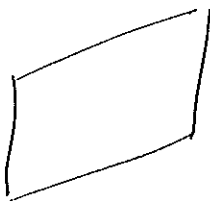
Work out the surface area of the triangular prism.  
State the units with your answer.



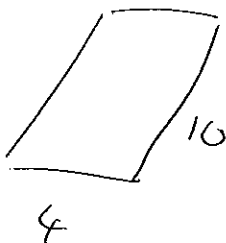
$$3 \times 4 = 12$$



$$5 \times 10$$



$$3 \times 10$$



$$4 \times 10$$

$$\dots\dots\dots 132 \text{ cm}^2$$

(Total 4 marks)

6.

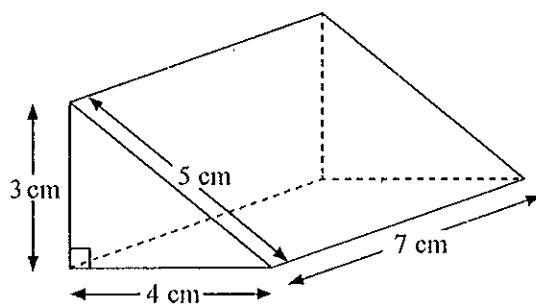


Diagram **NOT** accurately drawn

Work out the total surface area of the triangular prism.

$$\begin{array}{r} 3 \times 4 = 12 \\ 5 \times 7 = 35 \\ 4 \times 7 = 28 \\ 3 \times 7 = 21 \\ \hline 96 \end{array}$$

.....96.....  $\text{cm}^2$   
(Total 3 marks)

7.

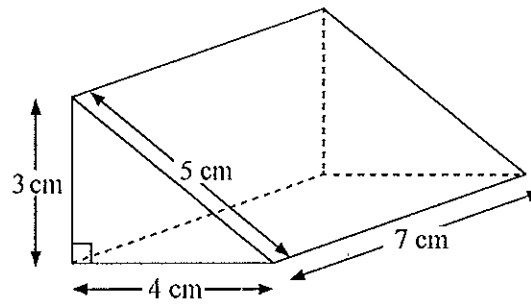


Diagram **NOT** accurately drawn

Work out the total surface area of the triangular prism.  
Give the units with your answer.

.....  $96 \text{ cm}^2$  .....

(Total 4 marks)

8.

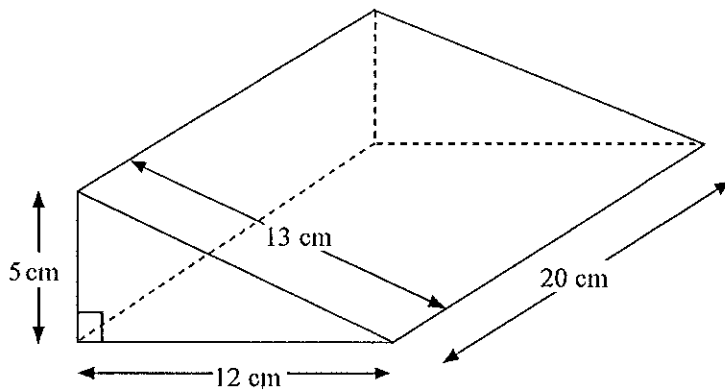


Diagram **NOT** accurately drawn

The diagram shows a right-angled triangular prism.

Work out the surface area of the triangular prism.

$$\begin{array}{rcl} 5 \times 12 & = & 60 \\ 13 \times 20 & = & 260 \\ 12 \times 20 & = & 240 \\ 5 \times 20 & = & 100 \end{array}$$

.....660..... cm<sup>2</sup>  
(Total 3 marks)

9.

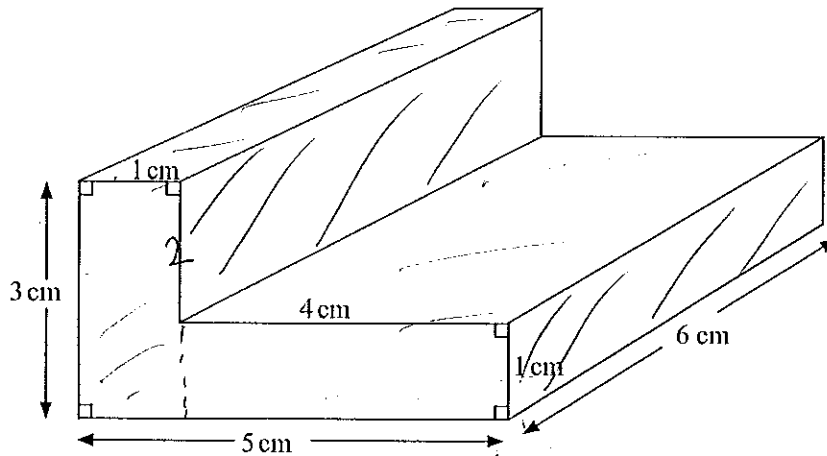


Diagram **NOT**  
accurately drawn

Work out the total surface area of the L-shaped prism.  
State the units with your answer.

$$\text{Bottom} = 5 \times 6 = 30$$

$$\text{Top} = 5 \times 6 = 30$$

$$\text{Side} = 3 \times 6 = 18$$

$$\text{Side} = 3 \times 6 = 18$$

$$\text{Front} = 4 \times 1 + 1 \times 3 = 7$$

$$\text{Back} = \text{---} \text{---} = 7$$

$$\text{..... } 110 \text{ cm}^2$$

(Total 4 marks)