Solutions by
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GCSE (9-1) Grade 4
Surface Area



Instructions

Use **black** ink or ball-point pen.
Fill in the boxes at the top of this page with your name.
Answer **all** questions.
Answer the questions in the spaces provided
- there may be more space than you need.

Show all your working out

Information

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

Advice

Read each question carefully before you start to answer it
Attempt every question
Check your answers if you have time at the end

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

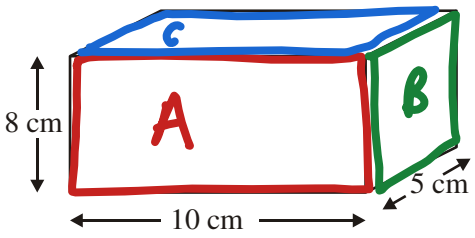
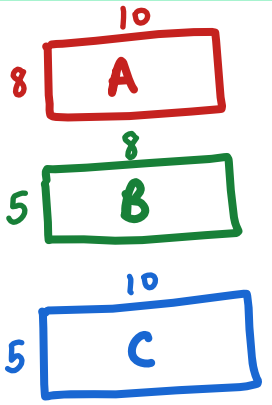


Diagram **NOT** accurately drawn

Work out the total surface area of the cuboid.

State the units with your answer.



$8 \times 10 = 80$

$5 \times 8 = 40$

$5 \times 10 = 50$

$80 + 40 + 50 = 170$

170×2

$= 340 \text{ cm}^2$

(Total 4 marks)

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

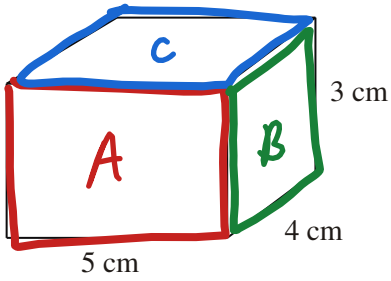
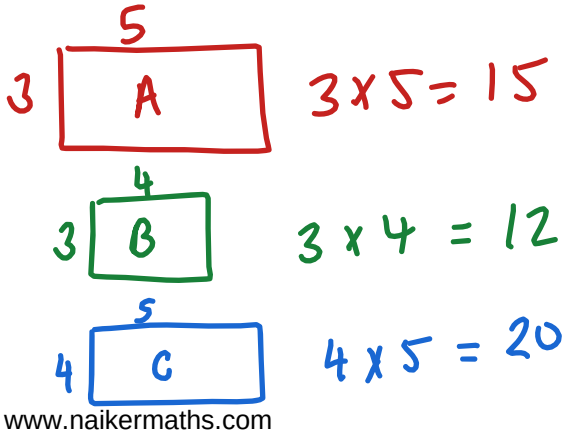


Diagram **NOT** accurately drawn

What is the total surface area of this cuboid?

State the units with your answer.



$3 \times 5 = 15$

$3 \times 4 = 12$

$4 \times 5 = 20$

$15 + 12 + 20 = 47$

47×2

$= 94 \text{ cm}^2$

(Total 4 marks)

3. Here is a cuboid.

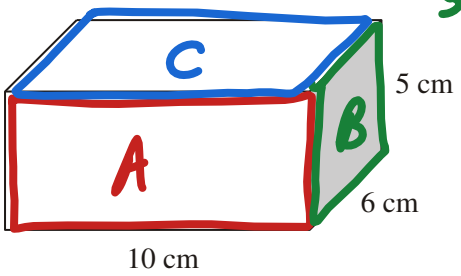


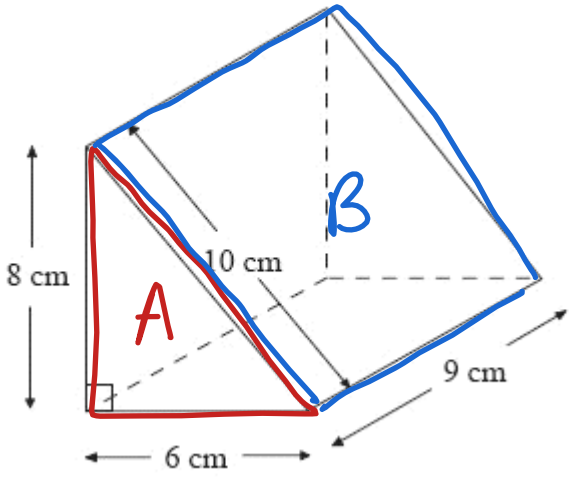
Diagram **NOT** accurately drawn

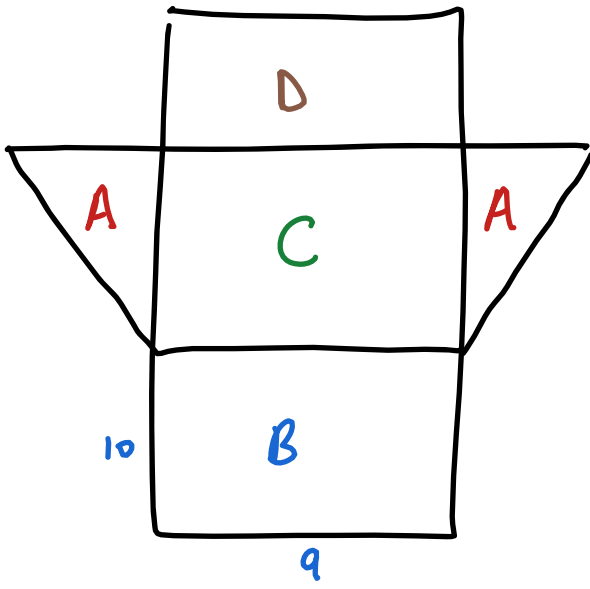
What is the total surface area of the cuboid?

State the units with your answer.

(Total 4 marks)

4.





Work out the surface area of the triangular prism.

State the units with your answer.

(Total 4 marks)

5.

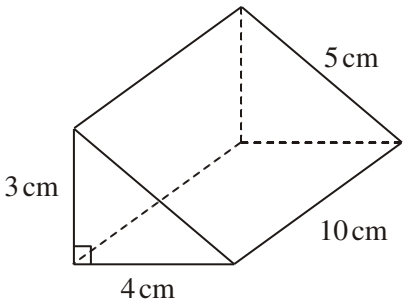


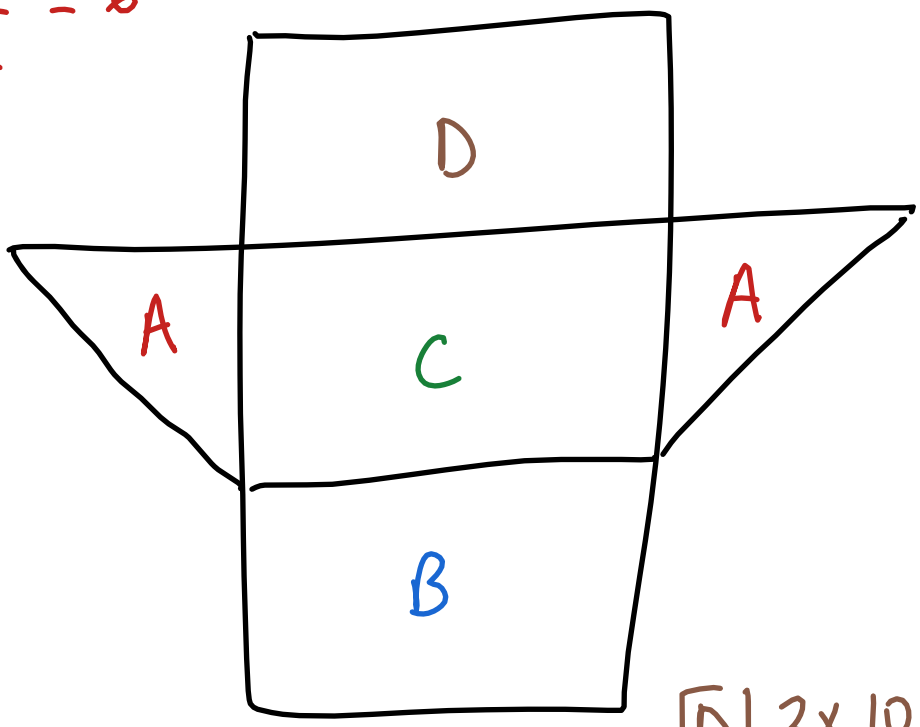
Diagram **NOT** accurately drawn

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.

[A] $\frac{3 \times 4}{2} = \frac{12}{2} = 6$

[C] $4 \times 10 = 40$



[D] $3 \times 10 = 30$

[B] $= 10 \times 5 = 50$

$6 + 6 + 50 + 40 + 30 =$ 132 cm²

(Total 4 marks)

6.

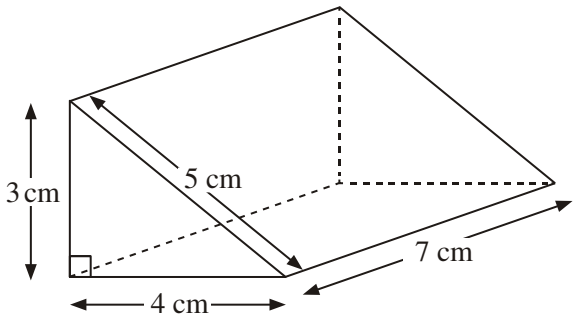


Diagram **NOT** accurately drawn

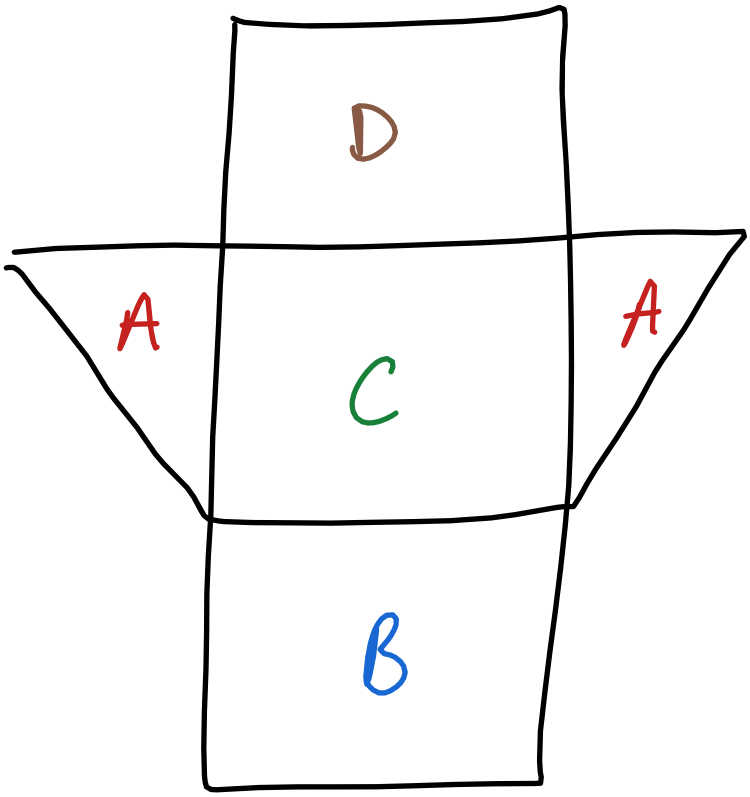
Work out the total surface area of the triangular prism.

A $\frac{3 \times 4}{2} = \frac{12}{2} = 6$

B $5 \times 7 = 35$

C $4 \times 7 = 28$

D $3 \times 7 = 21$



$6 + 6 + 35 + 28 + 21 = 96$

96 ..... cm^2

(Total 3 marks)

7.

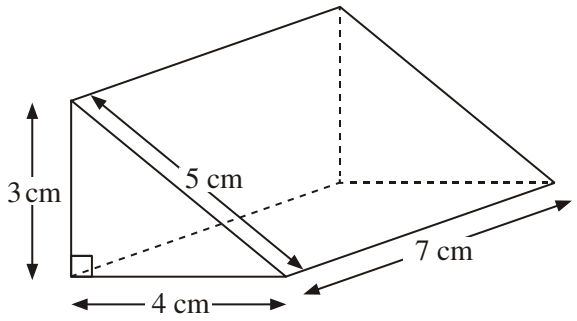


Diagram **NOT** accurately drawn

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

Same as question 6.

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(Total 4 marks)

8.

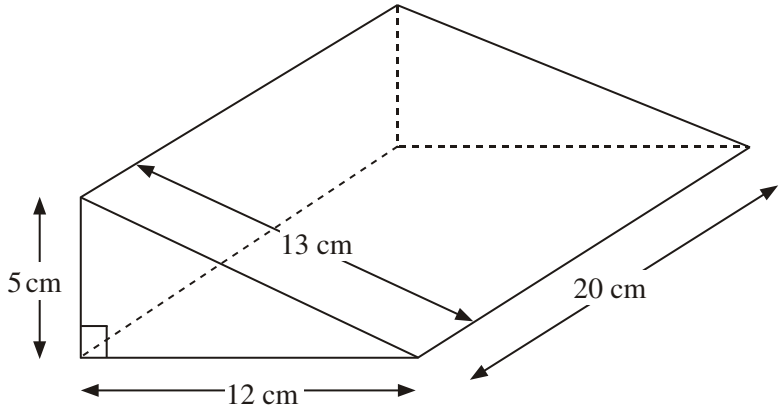


Diagram **NOT** accurately drawn

The diagram shows a right-angled triangular prism.

Work out the surface area of the triangular prism.

$\frac{5 \times 12}{2} = \frac{60}{2} = 30$

$13 \times 20 = 260$

$12 \times 20 = 240$

$5 \times 20 = 100$

$100 + 260 + 240 + 30 + 30 = 660$

..... cm^2

(Total 3 marks)

9.

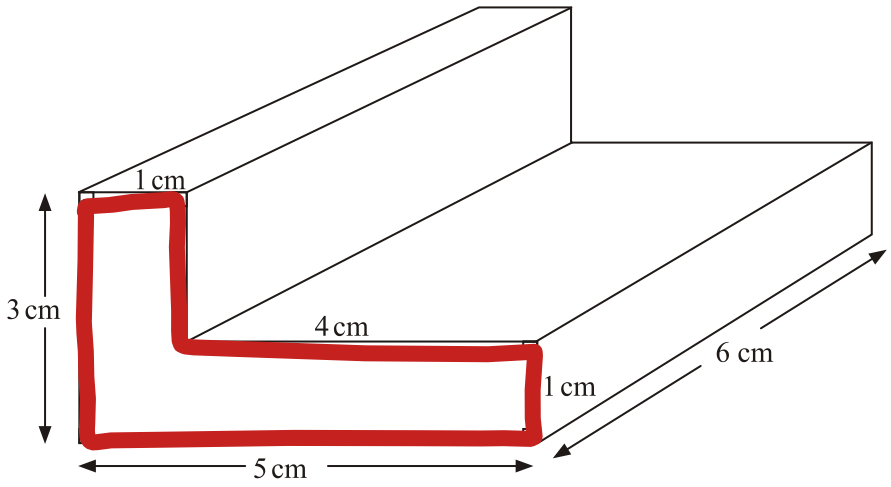
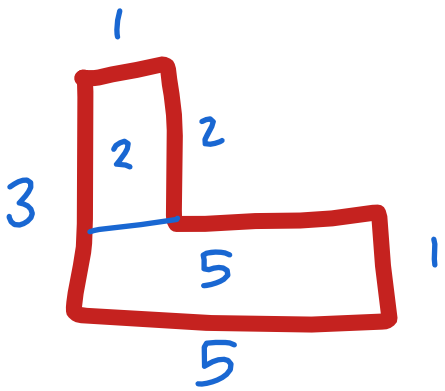


Diagram **NOT** accurately drawn

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



Area = 7cm²

96 + 7 + 7 + 110 cm²

.....

(Total 4 marks)

(1 + 2 + 4 + 1 + 5 + 3) × 6

= 16 × 6

= 96