1   Here are three similar cuboids, A, B and C.
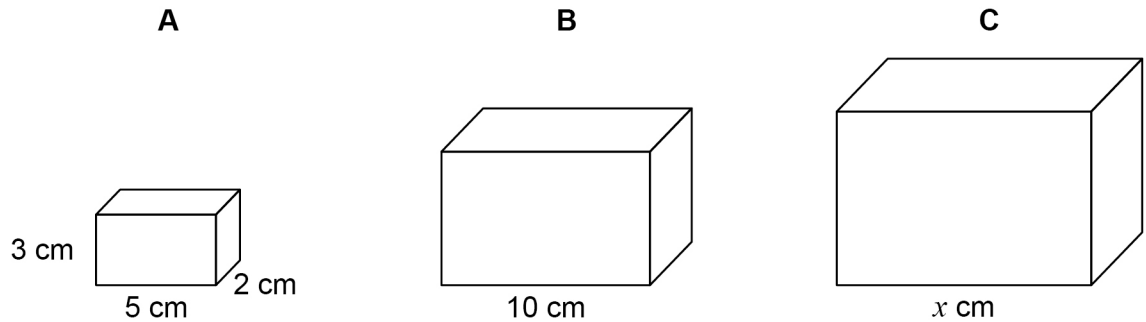
A has length 5 cm, width 2 cm and height 3 cm

B has length 10 cm

C has length x cm

A   **B**   **C**

3 cm

5 cm   2 cm   10 cm x cm

1 (a)   The total surface area of A is 62 cm^2

Tim wants to work out the total surface area of B.

Here is his working.

10 ÷ 5 = 2
62 × 2 = 124
Total surface area of B = 124 cm^2

Make **one** criticism of Tim's method.

[1 mark]

_____

_____

_____

_____

1 (b) Volume of A $\times \dfrac{125}{8}$ = Volume of C

Work out the value of x.
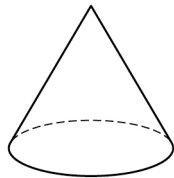
[3 marks]

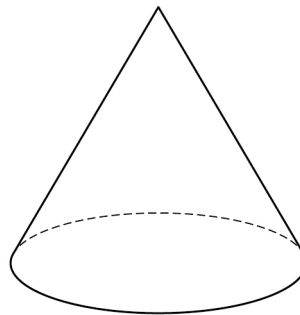Answer _____

2   Here are two similar cones.

Cone A   Cone B

The surface area of cone A is 2 m^2
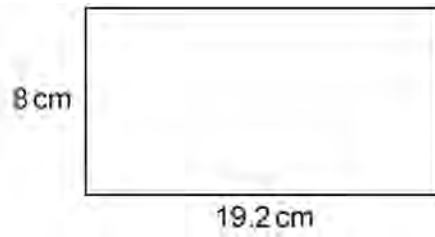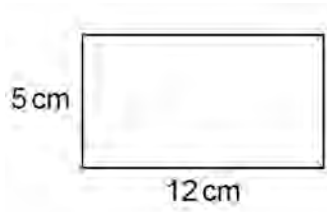
The surface area of cone B is 4.5 m^2

Work out the ratio   radius of cone A : radius of cone B

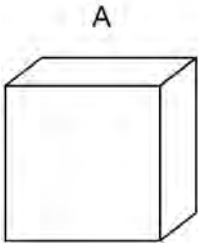Give your answer in the form   1 : n

[3 marks]

_____

_____

_____

_____

_____
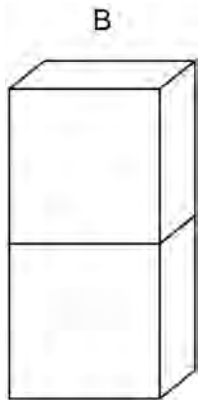
_____

_____

Answer _____   : _____

3   Show that these two rectangles are similar.

[2 marks]

Not drawn
accurately

5 cm

12 cm

8 cm

19.2 cm

4   Here is cuboid A.

A

Cuboid B is made from **two** of cuboid A.

B

volume of A : volume of B = 1 : 2

Matthew says,

   "surface area of A : surface area of B must be 1 : 2 because B is made of 2 of A."

Is Matthew correct?
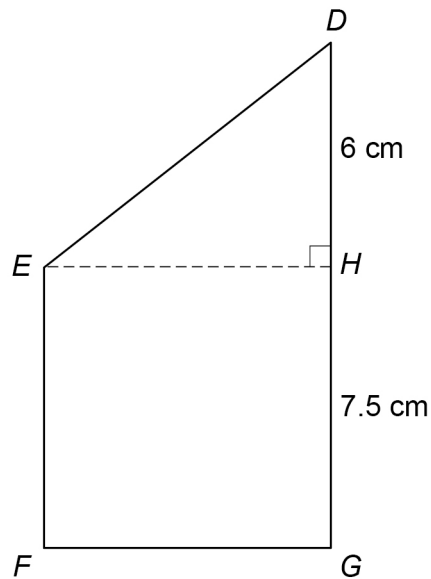
Tick **one** box.

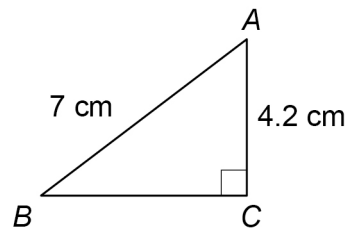| Yes | No | Cannot tell |

Give a reason for your answer.

[2 marks

5   Trapezium *DEFG* is formed by joining

triangle *DEH*

to

rectangle *EFGH*.

Not drawn
accurately

7 cm

4.2 cm

6 cm

7.5 cm

A

B   *C*

D

E   *H*

F   *G*

ABC is similar to *DEH*.

Work out the area of *DEFG*.

[5 marks]

Answer _____ cm^2