

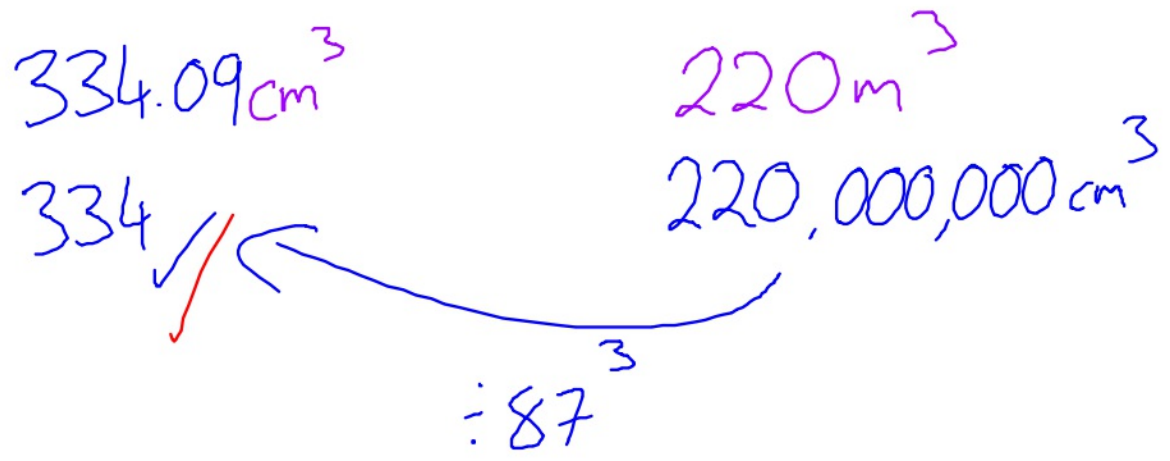
G36. Converting Metrics- Area and Volume

OCR

(b) The volume of a full-size train carriage is 220 m^3 .
Trevor calculates the volume of a model train carriage to be 334 cm^3 correct to 3 significant figures.

G3b
G5b

Is Trevor's calculation correct?
Show how you decide.



Length sf $\times 87$

Area sf $\times 87^2$

Volume sf $\times 87^3$

$1000000\text{ cm}^3 = 1\text{ m}^3$

(b) The volume of a full-size train carriage is 220 m^3 .

G36 Trevor calculates the volume of a model train carriage to be 334 cm^3 correct to 3 significant figures.

G56 Is Trevor's calculation correct?
Show how you decide.

..... [3]

Edexcel

AQA

2 Circle the area that is equal to 36 mm^2

[1 mark]

G36

360 cm^2

3600 cm^2

3.6 cm^2

0.36 cm^2

$$36 \div 100 = 0.36$$

2 Circle the area that is equal to 36 mm^2

[1 mark]

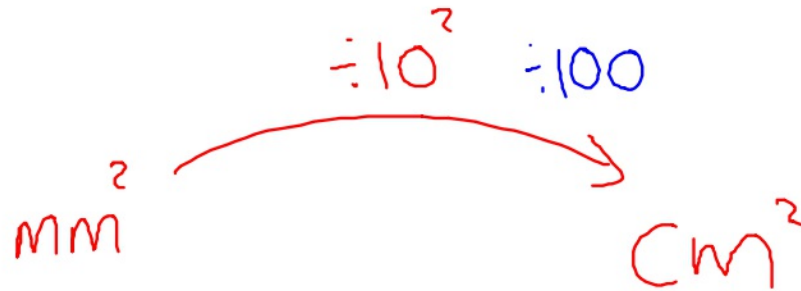
G36

360 cm^2

3600 cm^2

3.6 cm^2

0.36 cm^2



15

A company makes two types of lampshade using fabric on wire frames.

Video created by W Neill

Lampshade A

G29

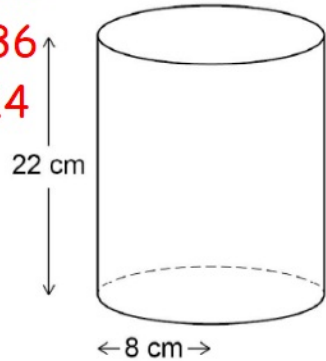
Fabric is used to make the curved surface of a cylinder.

G30

The cylinder has radius 8 cm and height 22 cm

G36

R14



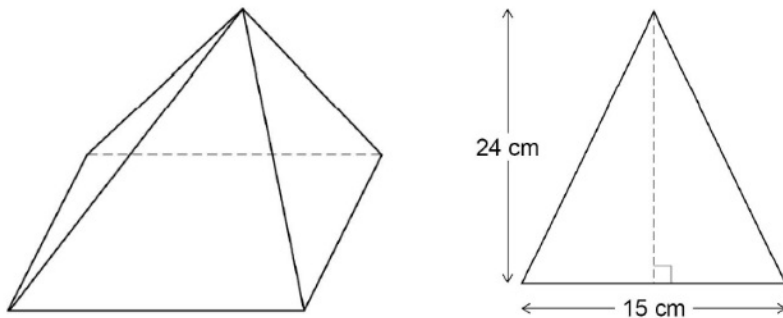
Cost of fabric	£400 per square metre
Other costs for A	£3.50 per lampshade
Other costs for B	£7.50 per lampshade

Work out the ratio cost of one lampshade A : cost of one lampshade B

Give your answer in the form $n : 1$ [5 marks]

Lampshade B

Fabric is used to make the four triangular faces of a pyramid.



Each triangular face has base 15 cm and perpendicular height 24 cm

Answer _____ : _____

15

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Lampshade A

Fabric is used to make the curved surface of a cylinder.

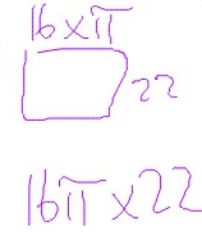
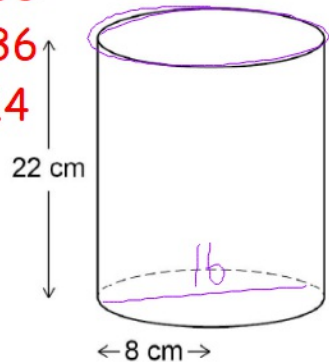
The cylinder has radius 8 cm and height 22 cm

G29

G30

G36

R14



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

$1 \text{ m}^2 = 100 \times 100 = 10000 \text{ cm}^2$

$= 1105.84 \text{ cm}^2$
 $= 0.110584 \text{ m}^2 \times \pounds 400$

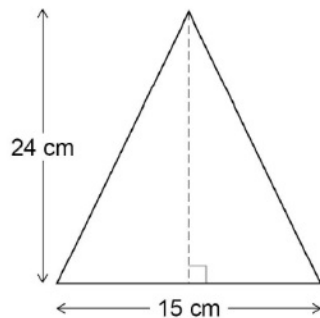
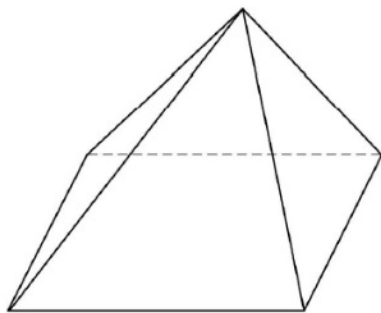
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Lampshade B

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Each triangular face has base 15 cm and perpendicular height 24 cm

$= \pounds 44.23$
 $+ 3.50$

 47.73

$\frac{B \times H}{2} = \frac{15 \times 24}{2} \times 4 = 720 \text{ cm}^2$
 $\div 10000 = 0.072 \text{ m}^2$
 $\times 400 = \pounds 28.80$
 $+ 7.50$

 $\pounds 36.30$

A - B
 $47.73 : 36.30$
 $\div 36.3$
 $\rightarrow 1.31 : 1$

Answer 1.31 : 1 ✓