

17.

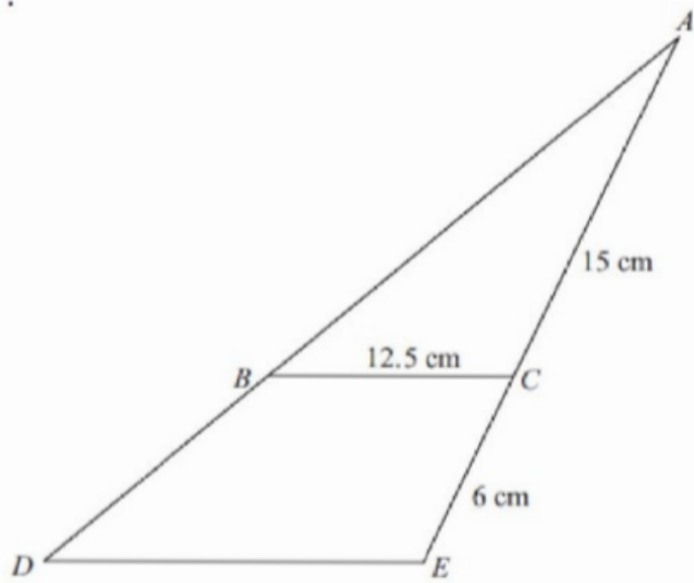


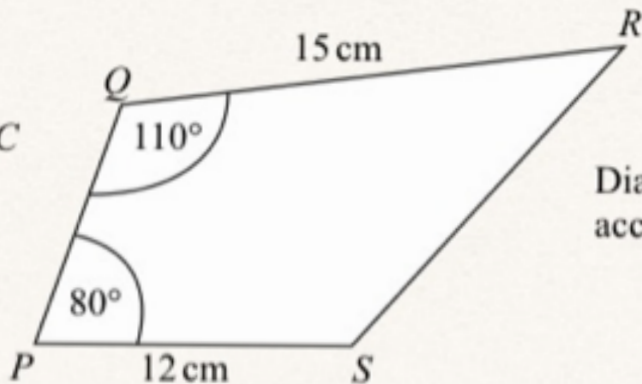
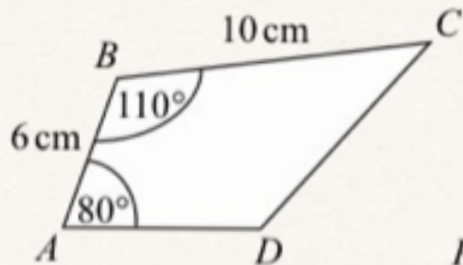
Diagram NOT
accurately drawn

Triangle ABC is similar to triangle ADE .
 $AC = 15$ cm.
 $CE = 6$ cm.
 $BC = 12.5$ cm.

Work out the length of DE .

.....

22.



Diagrams **NOT** accurately drawn

$ABCD$ and $PQRS$ are mathematically similar.

(a) Find the length of PQ .

..... cm
(2)

(b) Find the length of AD .

17. The diagram shows two similar triangles.

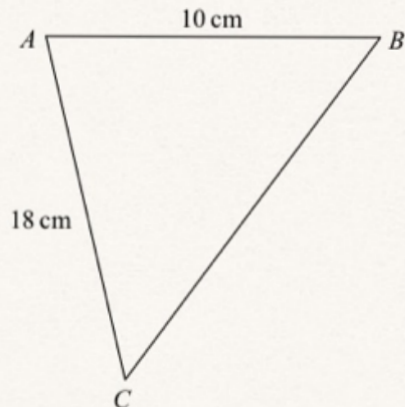
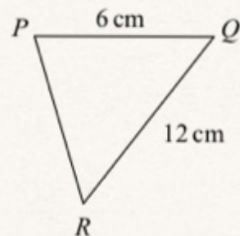


Diagram **NOT**
accurately drawn



In triangle ABC , $AB = 10\text{ cm}$ and $AC = 18\text{ cm}$.

In triangle PQR , $PQ = 6\text{ cm}$ and $QR = 12\text{ cm}$.

Angle $ABC = \text{angle } PQR$.

Angle $CAB = \text{angle } RPQ$.

(a) Calculate the length of BC .

..... cm

(2)

(b) Calculate the length of PR .

23. **A** and **B** are two solid shapes which are mathematically similar.
The shapes are made from the same material.

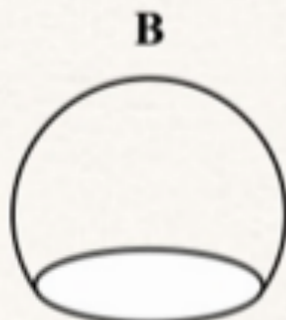
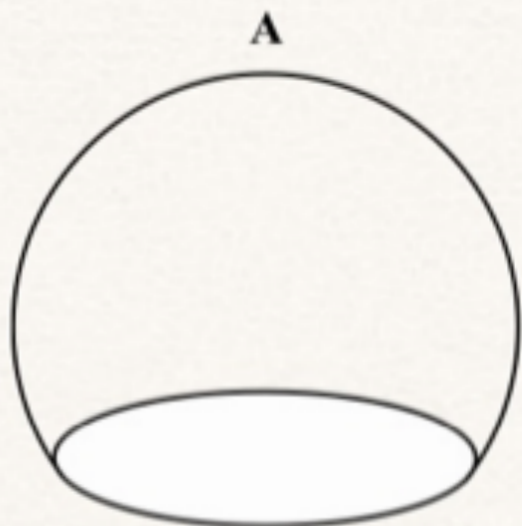


Diagram **NOT**
accurately drawn

The surface area of **A** is 50 cm^2 .

The surface area of **B** is 18 cm^2 .

The mass of **A** is 500 grams.

Calculate the mass of **B**.

21. The diagram shows two quadrilaterals that are mathematically **similar**.

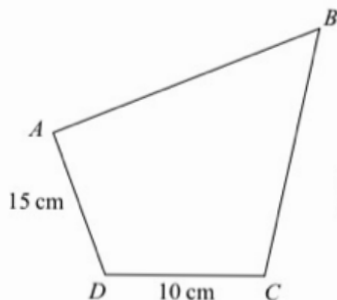
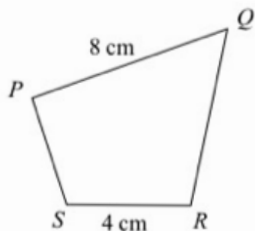


Diagram **NOT** accurately drawn

In quadrilateral $PQRS$, $PQ = 8$ cm, $SR = 4$ cm.

In quadrilateral $ABCD$, $AD = 15$ cm, $DC = 10$ cm.

Angle $PSR =$ angle ADC .

Angle $SPQ =$ angle DAB .

(a) Calculate the length of AB .

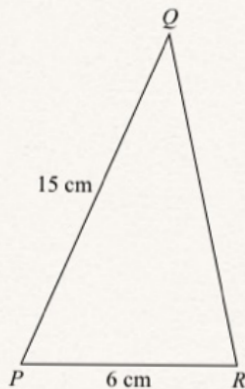
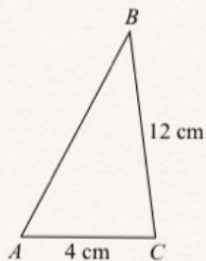
..... cm
(2)

(b) Calculate the length of PS .

..... cm
(2)

18.

Diagrams **NOT**
accurately drawn



Triangles ABC and PQR are mathematically similar.

Angle A = angle P .

Angle B = angle Q .

Angle C = angle R .

AC = 4 cm.

BC = 12 cm.

PR = 6 cm.

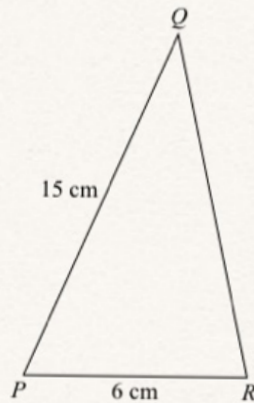
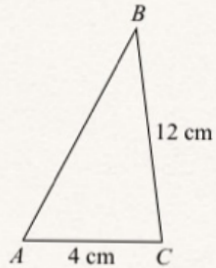
PQ = 15 cm.

(a) Work out the length of QR .

.....cm
(2)

(b) Work out the length of AB .

Diagrams **NOT**
accurately drawn



Triangles ABC and PQR are mathematically similar.

Angle A = angle P .

Angle B = angle Q .

Angle C = angle R .

AC = 4 cm.

BC = 12 cm.

PR = 6 cm.

PQ = 15 cm.

(a) Work out the length of QR .

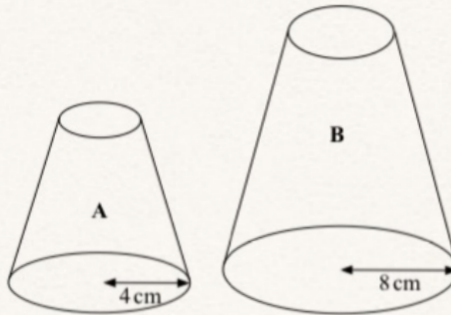
..... cm

(2)

(b) Work out the length of AB .

24.

Diagrams **NOT**
accurately drawn



Two solid shapes, **A** and **B**, are mathematically similar.
The base of shape **A** is a circle with radius 4 cm.
The base of shape **B** is a circle with radius 8 cm.

The surface area of shape **A** is 80 cm^2 .

(a) Work out the surface area of shape **B**.

..... cm^2
(2)

The volume of shape **B** is 600 cm^3 .

(b) Work out the volume of shape **A**.