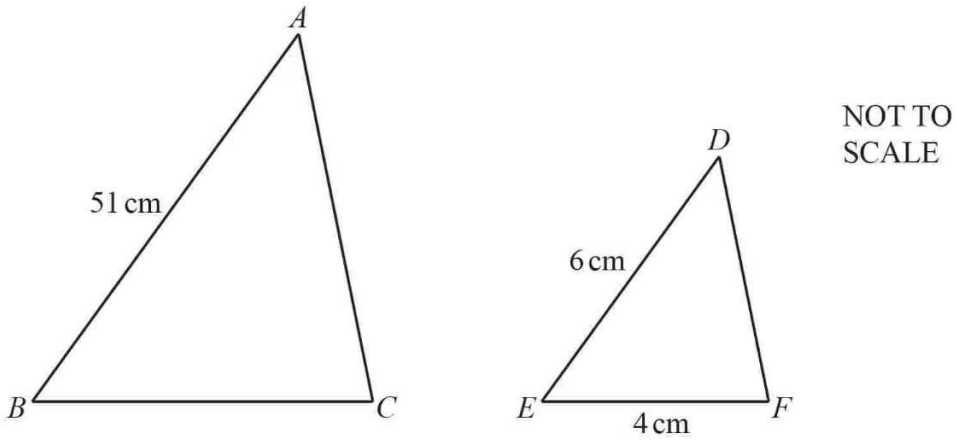
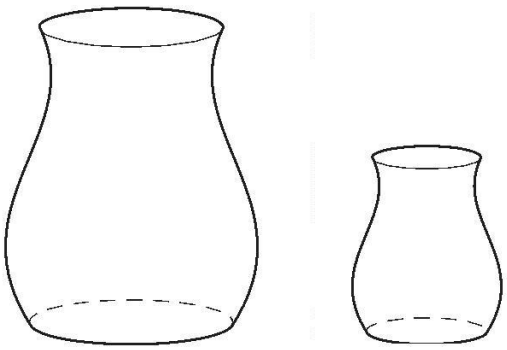
**1**




Triangle *ABC* is mathematically similar to triangle *DEF*.

Find *BC*.

**2**

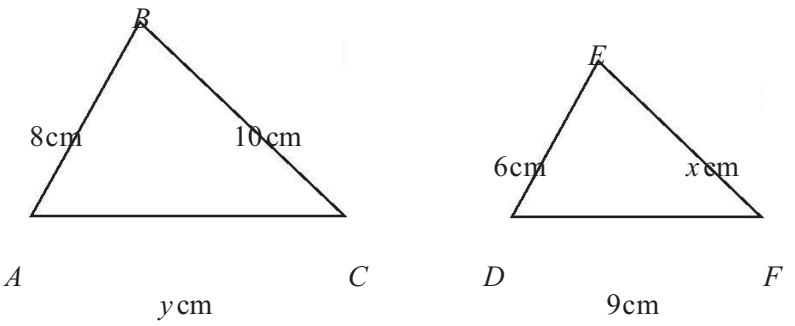


NOT TO SCALE

The two containers are mathematically similar in shape.
The larger container has a volume of 3456 $cm^3$ and a surface area of 1024 $cm^2$.
The smaller container has a volume of 1458 $cm^3$.

Calculate the surface area of the smaller container.

**3**




NOT TO SCALE

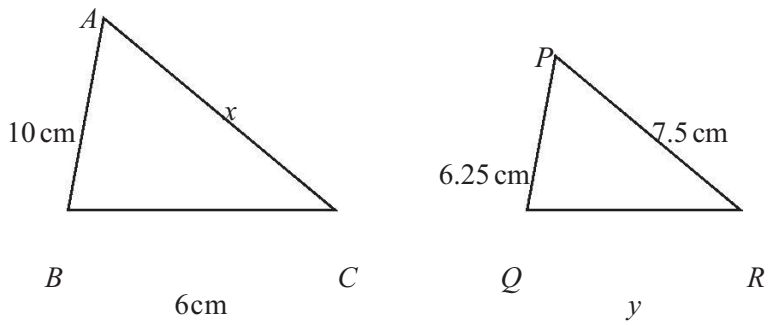
Triangle *ABC* is similar to triangle *DEF*.

Calculate the value of

**(a)** $x$,

**(b)** $y$.

**4**




NOT TO SCALE

The diagram shows two similar triangles *ABC* and *PQR*.

Find the value of

**(a)** *x*,

*Answer(a) x =*.....

**(b)** *y*.

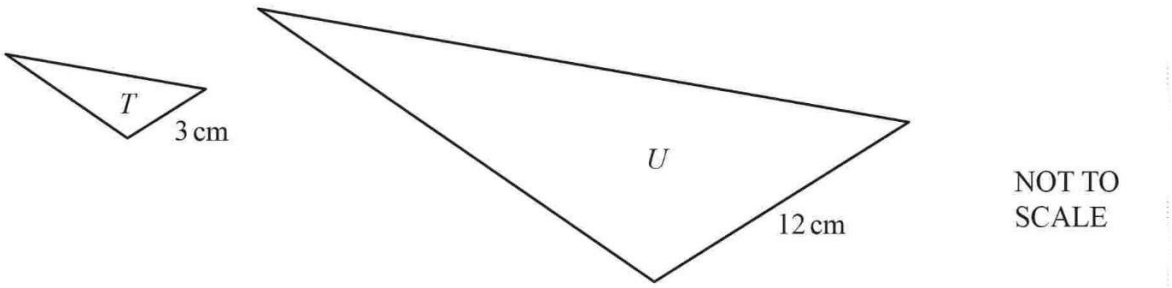
*Answer(b)y =*.....

**5** A map is drawn to a scale of 1 : 1 000 000.
A forest on the map has an area of 4.6 $cm^2$.

Calculate the actual area of the forest in square kilometres.

.....$km^2$

**6**

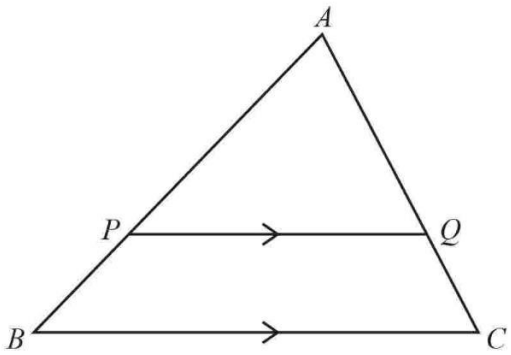



The diagram shows two mathematically similar triangles, $T$ and $U$.
Two corresponding side lengths are 3 cm and 12 cm.
The area of triangle $T$ is 5 $cm^2$.

Find the area of triangle $U$.

.....$cm^2$

**7**

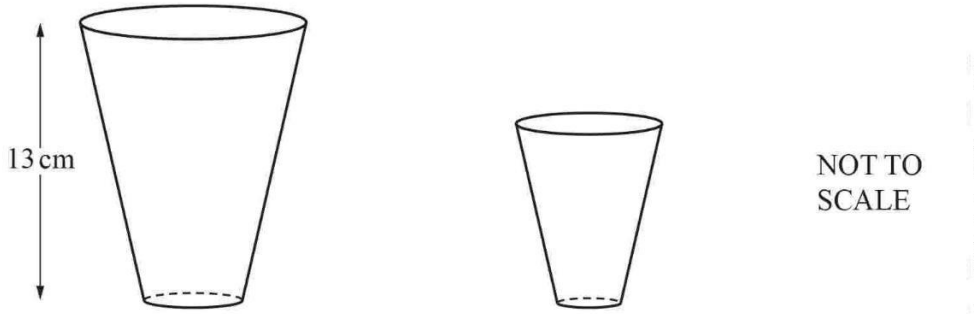



NOT TO SCALE

In the diagram, $PQ$ is parallel to $BC$.
$APB$ and $AQC$ are straight lines.
$PQ = 8$ cm, $BC = 10$ cm and $AB = 9$ cm.

Calculate $PB$

**8**




The diagram shows two glasses which are mathematically similar.
The larger glass has a capacity of 0.5 litres and the smaller glass has a capacity of 0.25 litres.
The height of the larger glass is 13 cm.

Calculate the height of the smaller glass.