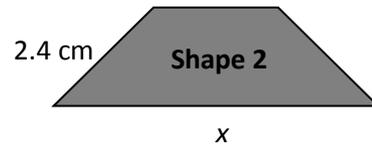
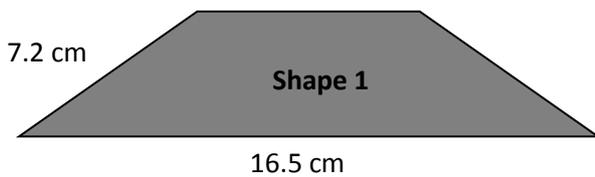
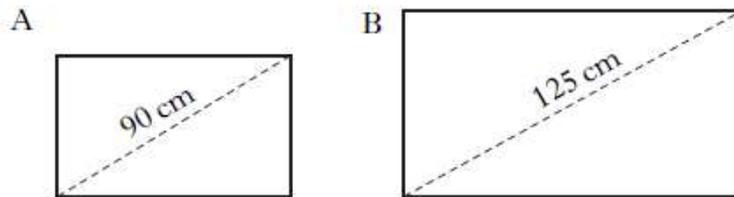


Similar Shapes

- The diagrams below are mathematically similar.
Calculate the length of the smaller shape.



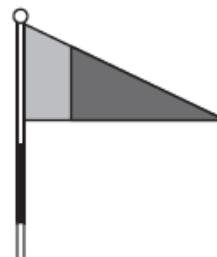
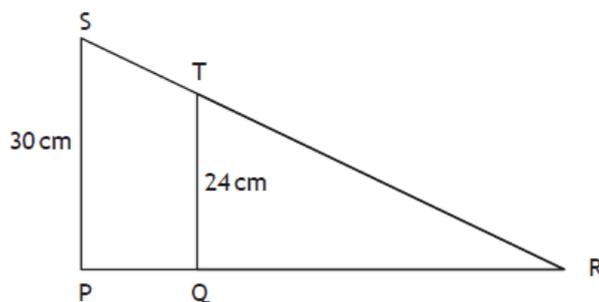
- Two rectangular solar panels, A and B, are mathematically similar.
Panel A has a diagonal of 90 centimetres and an area of 4020 square centimetres.



A salesman claims that panel B, with a diagonal of 125cm, will be double the area of panel A.
Is the claim justified?

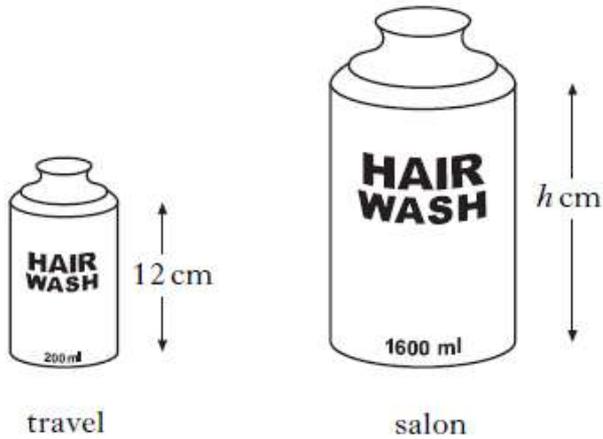
Show all your working.

- The flag on a golf course is coloured red and blue.
The diagram below represents a flag.
Triangle QRT represents the red section.
PQTS represents the blue section.



Triangles PRS and QRT are mathematically similar.
The area of triangle QRT is 400 square centimetres.
Calculate the area of PQTS, the blue section of the flag.

4. Shampoo is available in travel size and saloon size bottles.
The bottles are mathematically similar.



The travel size contains 200 ml and is 12 cm high.
The saloon size contains 1600 ml.
Calculate the height of the saloon size bottle.

5. An international perfume manufacturer prices their bottles of perfume **by volume**.

The two bottles below, although containing different volumes, are mathematically similar in shape. The heights and prices are shown.



The larger of the two bottles is for sale in France.

Assuming the smaller bottle to be priced correctly, determine whether or not the larger bottle has the correct price tag given that the exchange rate is £1 = 1.10 euros.