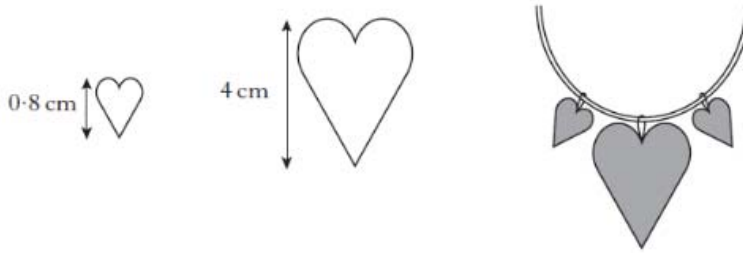


Similarity

2012 Paper 2

8. A necklace is made of beads which are mathematically similar.



3KU

The height of the smaller bead is 0.8 centimetres and its area is 0.6 square centimetres.

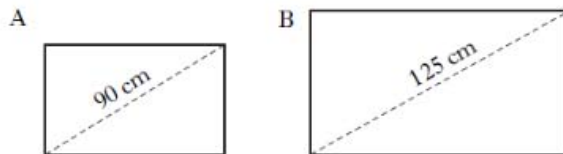
The height of the larger bead is 4 centimetres.

Find the area of the larger bead.

2011 Paper 2

6. 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.



4RE

A salesman claims that panel B, with a diagonal of 125 centimetres, will be double the area of panel A.

Is this claim justified?

Show all your working.

2010 Paper 1

7. Shampoo is available in travel size and salon size bottles.

The bottles are mathematically similar.



3KU

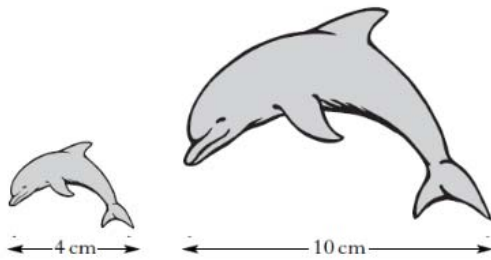
The travel size contains 200 millilitres and is 12 centimetres in height.

The salon size contains 1600 millilitres.

Calculate the height of the salon size bottle.

2009 Paper 2

4. Two fridge magnets are mathematically similar.
One magnet is 4 centimetres long and the other is 10 centimetres long.

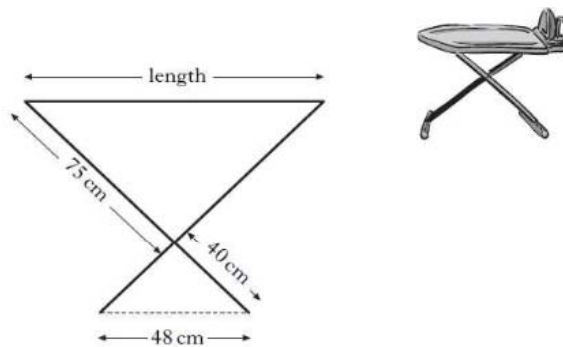


3KU

The area of the smaller magnet is 18 square centimetres.
Calculate the area of the larger magnet.

2007 Paper 1

8. Mick needs an ironing board.
He sees one in a catalogue with measurements as shown in the diagram below.

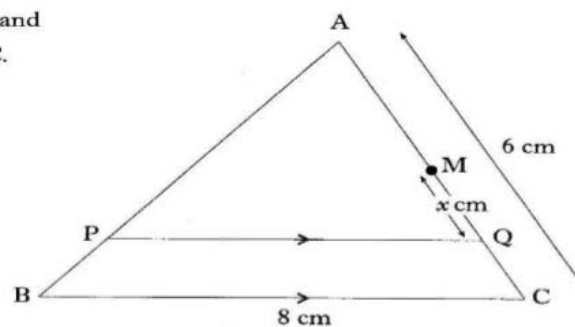


3RE

When the ironing board is set up, two similar triangles are formed.
Mick wants an ironing board which is at least 80 centimetres in length.
Does this ironing board meet Mick's requirements?
Show all your working.

2006 Paper 2

11. In triangle ABC,
BC = 8 centimetres,
AC = 6 centimetres and
PQ is parallel to BC.



- M is the midpoint of AC.
Q lies on AC, x centimetres from M, as shown on the diagram.
(a) Write down an expression for the length of AQ.
(b) Show that $PQ = (4 + \frac{4}{3}x)$ centimetres.