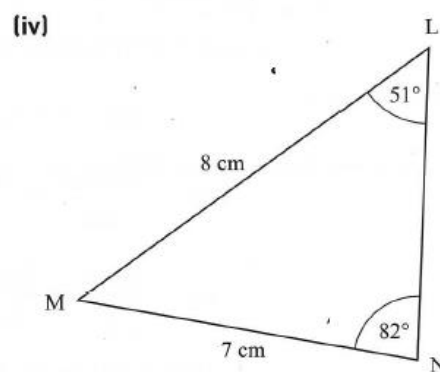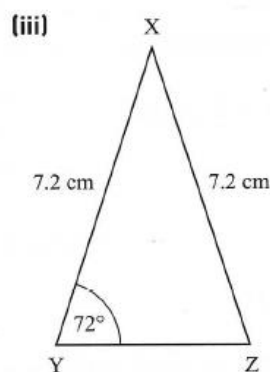# The Area Rule

Exercise

1 Find the area of each of the following triangles.

**(i)**

(ii)

(iii)

(iv)
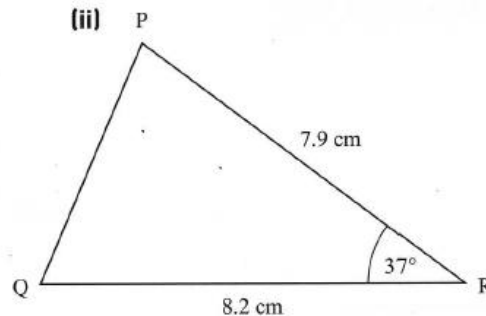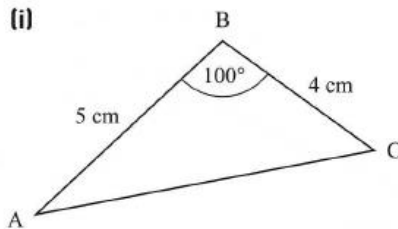
2 A regular hexagon is made up of six equilateral triangles. Find the area of a regular hexagon of side 7 cm.

3 A pyramid on a square base has four identical triangular faces which are isosceles triangles with equal sides 9 cm and equal angles 72°.
   (i)   Find the area of a triangular face.
   (ii)   Find the length of a side of the base.
   (iii)   Hence find the total surface area of the pyramid.

4 A tiler wishes to estimate the number of triangular tiles needed to tile an area of 10 m². The dimensions of each tile are shown in the diagram.
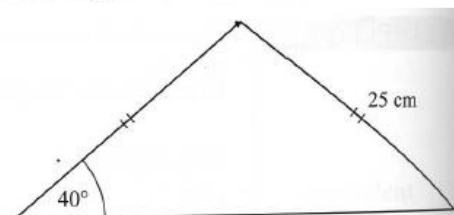
   (i)   Find the area of a tile.
The tiler then divides 10 m² by this area and rounds to the next whole number.
   (ii)   What result would this give?
   (iii)   Explain what is wrong with this estimate.

5 A regular tetrahedron has four sides, each of which is an equilateral triangle of side 10 cm. Find the total surface area of the tetrahedron.