Pythagoras Theorem

1) Find the unknown side in each of the following triangles:

![Triangle Diagrams]

2) An isosceles triangle ABC has sides AB=AC=10cm, and BC= 12cm. Draw the triangle, and find the perpendicular height from A to the midpoint of BC. Hence find the area of the triangle.

3) A ladder 3m long is placed against a wall, with the foot of the ladder 1.2m from the base of the wall. Draw a diagram, and find how far up the wall the ladder reaches.

4) Plot the points X(2,7) and Y(6,4) on coordinate axes. Draw a right-angled triangle with XY as the hypotenuse, and use Pythagoras' theorem to find the distance XY.

5) An isosceles trapezium ABCD has sides AB=CD=8cm, BC=12cm and DA=18cm. Find its area.