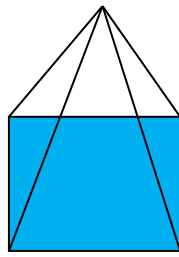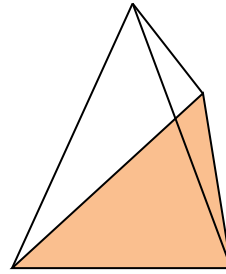# Pyramids and Cones

- A pyramid is a 3-D object that has a flat base and the edges come to a point at the top.
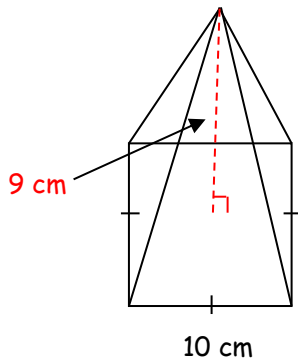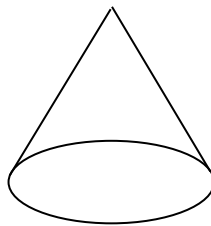
     i.e.

Square-Based
Pyramid

Triangular-Based
Pyramid

- There are two heights to be concerned with when examining a pyramid. The vertical height and the slant height.
  - The vertical height, h, is measured from the center of the base to the point.
  - The slant height, s, is measured from the side of the base to the point.

- Since pyramids are made up of triangular shapes be prepared to use the Pythagorean Formula.

Ex/ Calculate the slant height of the pyramid below.
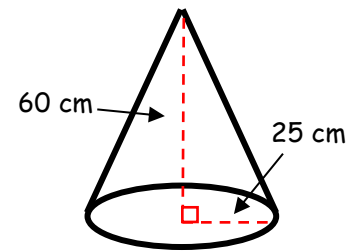
9 cm

10 cm

- A cone is a special version of a pyramid. It also has a flat base with edges that come to a point. However, its base is a circle.
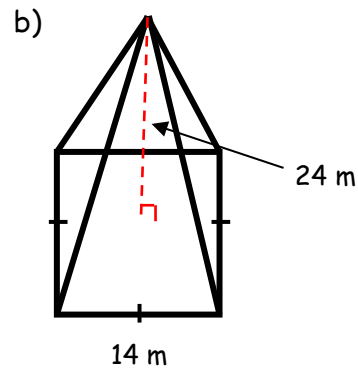
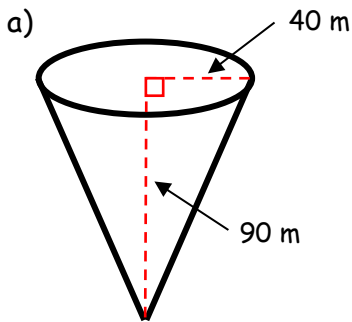- When discussing pyramids and cones we often discuss the lateral area. By this we mean all of the surfaces, excluding the base.

Ex/ A pylon is the shape of a cone is shown below. The outside surface of the cone is to be painted, but not the bottom. What is the area to be painted?

60 cm

25 cm

Ex/ Calculate the surface area of the following shapes.

a)   40 m

90 m

b)

24 m

14 m

Ex/ Calculate the surface area of the composite shape shown below.

3 m

4 m

8 m

8 m

Practice: Handout – SA of Pyramids and Cones