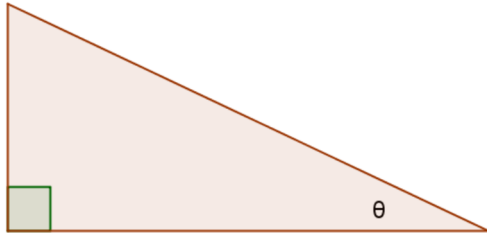


Lesson 5 Solving Problems with Two Right Triangles

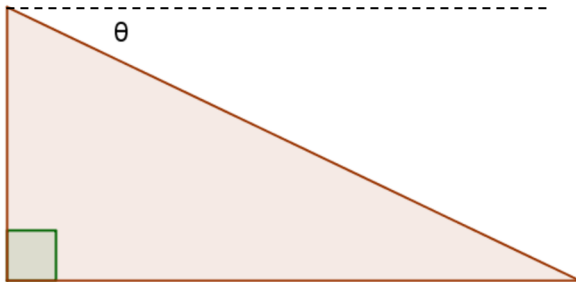
Recall:

Angle of Elevation



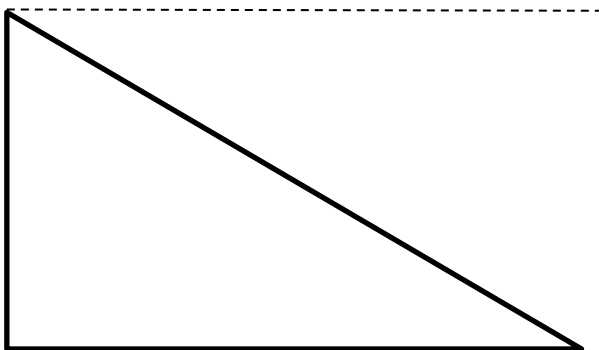
The angle of elevation is the angle formed by the line of sight and the horizontal plane for an object above the horizontal.

Angle of Depression



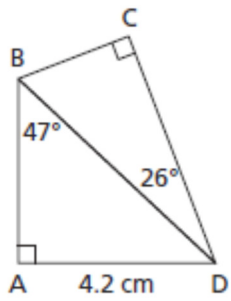
The angle of depression is the angle formed by the line of sight and the horizontal plane for an object below the horizontal.

Angle of Elevation = Angle of Depression



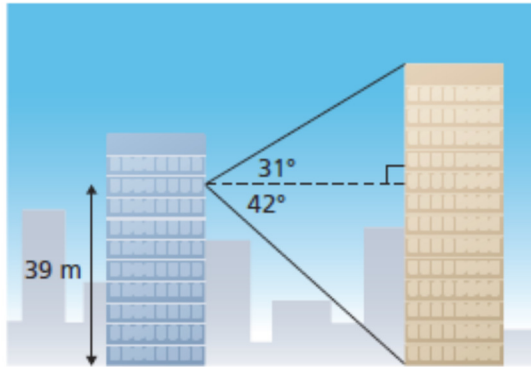
Example 1

Determine the length of CD correct to 3 decimal places.



Example 2

A surveyor stands at a window on the 9th floor of an office tower. He uses a clinometer to measure the angles of elevation and depression of the top and the base of a taller building. The surveyor sketches the following plan of his measurements. Determine the height of the taller building to the nearest tenth of a metre.



Example 3

A police airplane, flying at an altitude of 800 m, spots a speeding vehicle at an angle of depression of 52° . If a roadblock is set up along the same highway at an angle of depression of 23° , determine the distance the vehicle is from the roadblock to the nearest hundredth of a kilometer.