Section 2.4 Solving Right Triangles

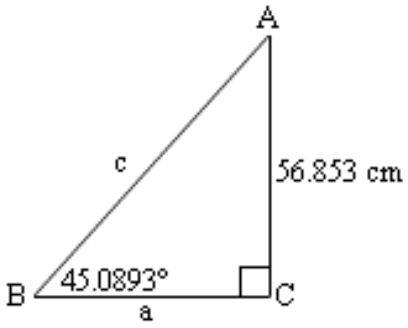
To solve a right triangle means to find the measures of all of the angles and sides of a triangle.

Example 1: Solve the right triangle ABC, if $B = 28° 40'$ and $a = 25.3$ cm.

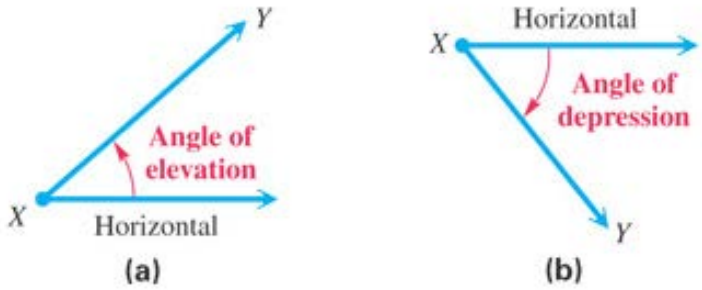
Example 2: Solve the right triangle ABC, if $a = 18.9$ cm and $c = 46.3$ cm.

Example 3:

Solve the right triangle.



Angles of Depression and Elevation



Example 4: The angle of elevation from a point on the ground 15.5 m from the base of a tree to the top of the tree is $60.4°$. Find the height of the tree.

Example 5: Find the angle of depression from the top of a 97 ft building to the base of a building across the street located 42ft away.

Example 6:

From a window 29.0 ft above the street, the angle of elevation to the top of the building across the street is 46.0° and the angle of depression to the base of this building is 16.0°. Find the height of the building across the street.