

Applications using Right Triangles

*** Angles of **ELEVATION** and **DEPRESSION** always originate from horizontal. ***

1. A safety regulation states that the maximum angle of elevation for a rescue ladder is 72° . If a fire department's ladder is 110 feet long, what is the maximum safe rescue height?

2. The length of the shadow of a 200 foot tower is 70 feet. Find the angle of elevation to the sun.

3. At the point 200 feet from the base of a building, the angle of elevation to the bottom of a smokestack on top of the building is 35° and the angle of elevation to the top of the same smokestack is 53° . Find the height of the smokestack.