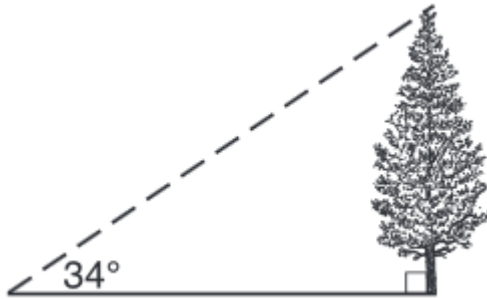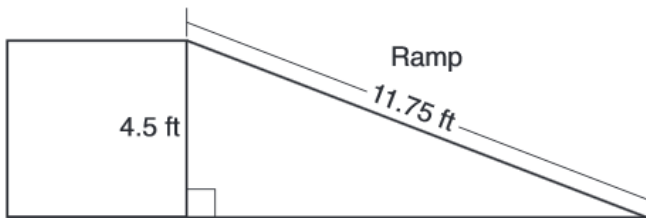1. The angle of elevation from a point on the ground to the top of a tree is 34°. What is the height of the tree (*to the nearest tenth of a foot*)?


2. An 11.75 ft. ramp is constructed to meet the top of a 4.5ft set of stairs. What is the angle of elevation of the ramp (*to the nearest degree*)?


3. A spaceship beams a robot to the Earth's surface. The robot travels approximately 3,500 meters at an angle of depression of 68.5º from the ship down to the surface. What is the vertical height of the spaceship, to the nearest meter?
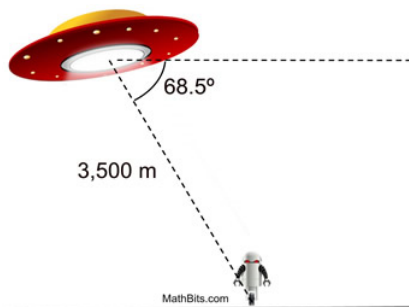
4. While fighting a forest fire, several firemen are trapped behind the burn line of the fire. A rescue plane is searching for the firemen. Cruising at 1500 feet, the plane spots one of the firemen ahead on the ground at an angle of depression of 30 degrees. What is the plane's horizontal distance, to the *nearest foot*, from the fire fighter?
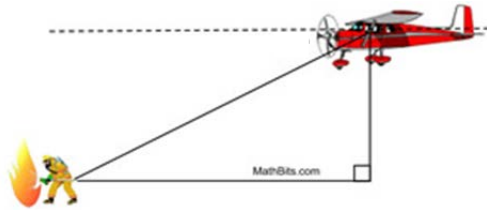
5. An observer standing 300 ft from the Eiffel Tower measures the angle of elevation to the top to be 73°. After backing away from the tower, the observer measures the angle of depression to be 55°. How far did the observer back away from their original location? *Round to the nearest foot*
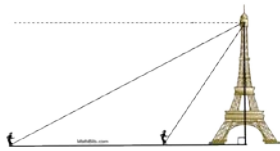
55°   73°
                         300 ft

6. Alex is standing in the hay loft doorway of a barn looking at a nearby tree. The horizontal distance from Alex to the tree (**A**) is 30 feet. The angle of elevation of a bird (**B**) at the top of the tree is 32° and the angle of depression of his dog (**C**) at the foot of the tree is 40°. What is the height of the tree, to the **nearest tenth of a foot** ?