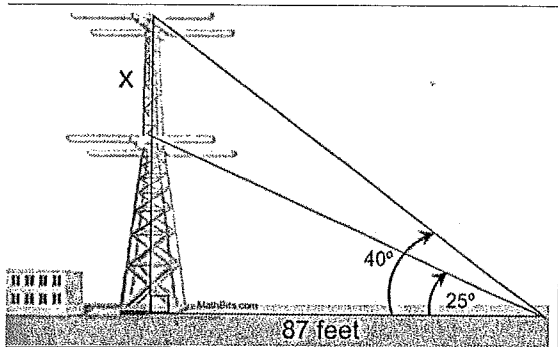


Accel Pre-Calc: Trig Word Problem Practice WS (Double Triangles)

A radio station tower was built in two sections. From a point 87 feet from the base of the tower, the angle of elevation of the top of the first section is 25° , and the angle of elevation of the top of the second section is 40° . To the *nearest foot*, what is the height of the top section of the tower?



- 2) You are standing on a plateau that is 800 feet above a basin where you see two hikers. If the angle of depression to the hikers is 25° and 15° , how far apart are the two hikers, rounded to the nearest hundredth of a foot?

- 3) An aeroplane at an altitude of 1800 m finds that two boats are sailing towards it in the same direction. The angles of depression of the boats as observed from the aeroplane are 60° and 30° respectively. Find the distance between the two boats. ($\sqrt{3} = 1.732$)

- 4) Brad is standing on a 40-foot ocean bluff. He can see his two dogs on the beach below. If his line of sight is 6 feet above the ground and the angles of depression to his dogs are 34° and 48° , how far apart are the dogs to the nearest foot?