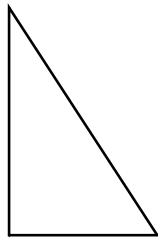


Section 2-5 Applying Trigonometry to Real life

1. You are measuring the height of a building. You stand 100 feet from the base of the building. You measure the angle of elevation from a point on the ground to the top of the building to be 48° . Estimate the height of the building.
2. An airplane flying at an altitude of 30,000 ft is headed toward an airport. To guide the airplane to a safe landing, the airport's landing system sends radar signals from the runway to the airplane at a 10° angle of elevation. How far is the airplane (measured along the ground) from the airport runway?
3. A ship is passing through the Strait of Gibraltar. At its closest point of approach, Gibraltar radar determines that the ship is 2400 m away. Later, the radar determines that the ship is 2650 m away. By what angle did the ship's bearing from Gibraltar change?



4. **Skyscraper** You are a block away from a skyscraper that is 780 feet tall. Your friend is between the skyscraper and yourself. The angle of elevation from your position to the top of the skyscraper is 42° . The angle of elevation from your friend's position to the top of the skyscraper is 71° . To the nearest foot, how far are you from your friend?

