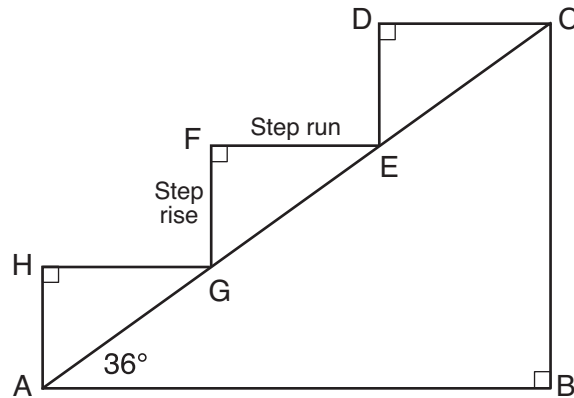


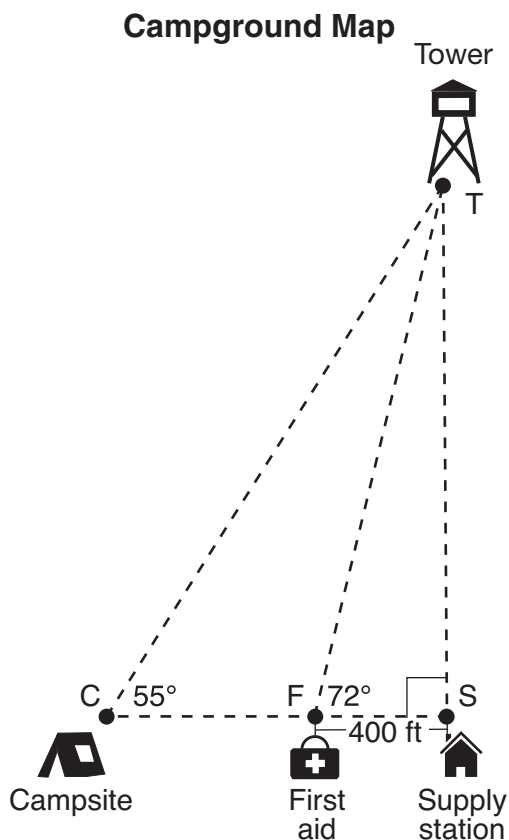
- 33** A homeowner is building three steps leading to a deck, as modeled by the diagram below. All three step rises, \overline{HA} , \overline{FG} , and \overline{DE} , are congruent, and all three step runs, \overline{HG} , \overline{FE} , and \overline{DC} , are congruent. Each step rise is perpendicular to the step run it joins. The measure of $\angle CAB = 36^\circ$ and $m\angle CBA = 90^\circ$.



If each step run is parallel to \overline{AB} and has a length of 10 inches, determine and state the length of each step rise, to the *nearest tenth of an inch*.

Determine and state the length of \overline{AC} , to the *nearest inch*.

- 33 The map of a campground is shown below. Campsite C , first aid station F , and supply station S lie along a straight path. The path from the supply station to the tower, T , is perpendicular to the path from the supply station to the campsite. The length of path \overline{FS} is 400 feet. The angle formed by path \overline{TF} and path \overline{FS} is 72° . The angle formed by path \overline{TC} and path \overline{CS} is 55° .



Determine and state, to the *nearest foot*, the distance from the campsite to the tower.