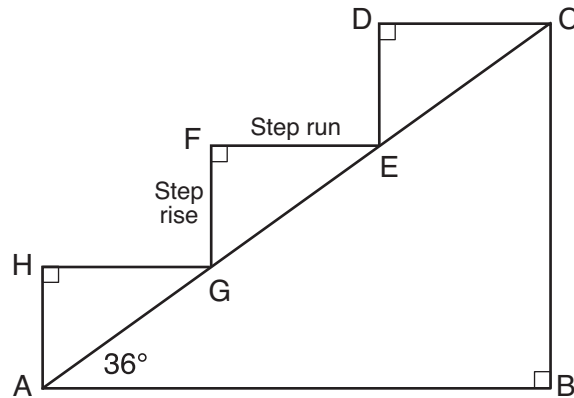


- 33** A homeowner is building three steps leading to a deck, as modeled by the diagram below. All three step rises,  $\overline{HA}$ ,  $\overline{FG}$ , and  $\overline{DE}$ , are congruent, and all three step runs,  $\overline{HG}$ ,  $\overline{FE}$ , and  $\overline{DC}$ , are congruent. Each step 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*.