BECA/Huson/Geometry: Solid geometry First and last name:
7 March 2025 Section:

5.16 Test G.SRT.5 Use similarity criteria for triangles to solve problems

1. A dilation maps $\triangle ABC \to \triangle ADE$. Given $AB = 12$, $AC = 15$, $BC = 9$, $CE = 20$.

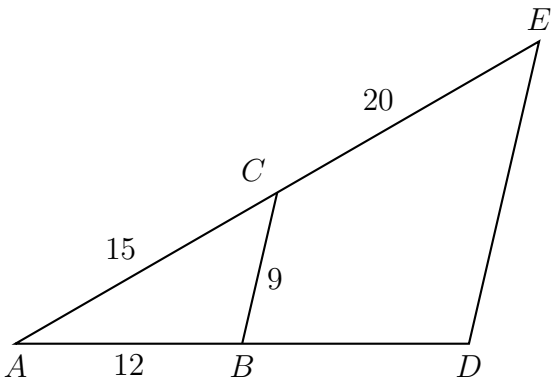
   Find the scale factor and side lengths:

   $k =$

   $DE =$

   $AD =$

   $BD =$



G.SRT.C.8 Use trigonometry to solve problems with right triangles

2. As shown, right $\triangle ABC$ has $AC = 5, BC = 12, AB = 13$, $\text{m}\angle C = 90°$.

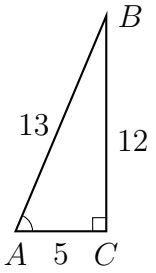
   Express each trigonometric ratio as a fraction.

   (a) $\sin A =$

   (b) $\cos A =$

   (c) $\tan A =$

   (d) Find the angle measure of $\angle A$ rounded to the *nearest whole degree.*



3. At an angle of elevation of 15°, the top of a structure B is visible from point A on the ground 50 meters away, as shown below.

   Find the height h of the structure to the *nearest tenth of a meter.* (not to scale)