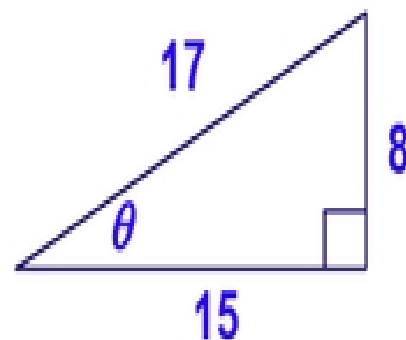


Example: A right triangle has sides whose lengths are 8 in., 15 in. and 17 in. Find the values of the six trig functions of the acute angle,  $\theta$ , shown in the diagram.



$$\sin \theta = \frac{\textit{opposite}}{\textit{hypotenuse}} = \frac{8}{17} \qquad \csc \theta = \frac{\textit{hypotenuse}}{\textit{opposite}} = \frac{17}{8}$$

$$\cos \theta = \frac{\textit{adjacent}}{\textit{hypotenuse}} = \frac{15}{17} \qquad \sec \theta = \frac{\textit{hypotenuse}}{\textit{adjacent}} = \frac{17}{15}$$

$$\tan \theta = \frac{\textit{opposite}}{\textit{adjacent}} = \frac{8}{15} \qquad \cot \theta = \frac{\textit{adjacent}}{\textit{opposite}} = \frac{15}{8}$$