

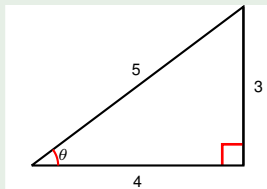
Precalculus

Compute the trigonometric functions in a right angle triangle, part 1

Todor Milev

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Example



Let the angle θ be as indicated in the figure. Find the values of the six trigonometric functions of θ .

To find the trigonometric functions, we need to know the length of the hypotenuse.

$$\text{hypotenuse} = \sqrt{4^2 + 3^2} = \sqrt{25} = 5.$$

Using the right angle triangle ratio interpretations of the trig functions, we can compute:

$$\begin{array}{lll} \sin \theta = \frac{3}{5} & \cos \theta = \frac{4}{5} & \tan \theta = \frac{3}{4} \\ \csc \theta = \frac{5}{3} & \sec \theta = \frac{5}{4} & \cot \theta = \frac{4}{3} \end{array}$$