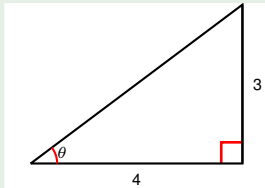# Precalculus
Compute the trigonometric functions in a right angle triangle, part 1

Todor Milev

2019

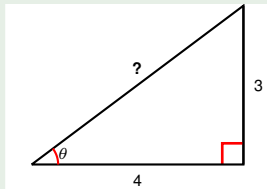## Example

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

$\sin \theta =$ $\cos \theta =$ $\tan \theta =$

$\csc \theta =$ $\sec \theta =$ $\cot \theta =$

Example

[3] 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.

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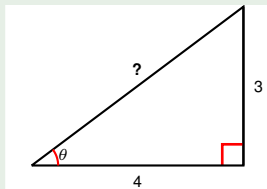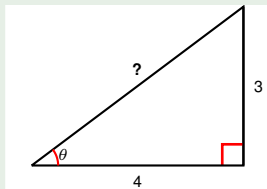
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Example

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

$$\text{hypotenuse} = \textbf{?}$$

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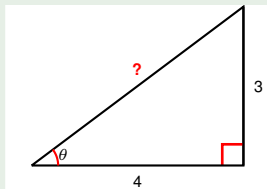
To find the trigonometric functions, we need to know the length of the hypotenuse.

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

$\sin \theta =$ $\qquad$ $\cos \theta =$ $\qquad$ $\tan \theta =$

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Example

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

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

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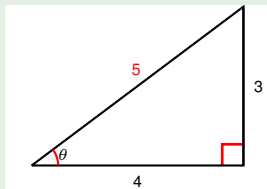
To find the trigonometric functions, we need to know the length of the hypotenuse.

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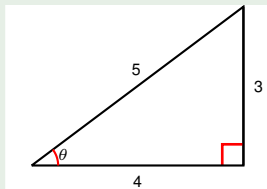
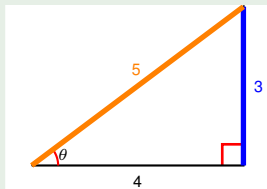To find the trigonometric functions, we need to know the length of the hypotenuse.

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

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

$$\sin\theta = \textbf{?} \quad \cos\theta = \quad \tan\theta =$$

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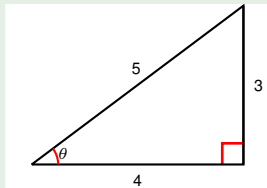
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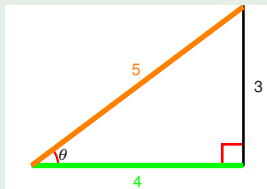To find the trigonometric functions, we need to know the length of the hypotenuse.

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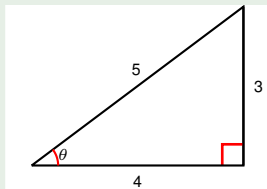
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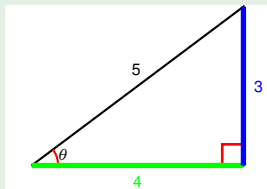To find the trigonometric functions, we need to know the length of the hypotenuse.

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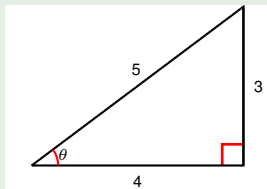
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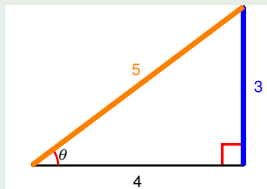To find the trigonometric functions, we need to know the length of the hypotenuse.

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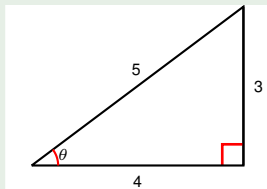
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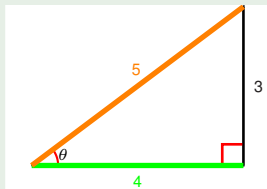
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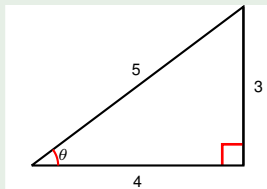
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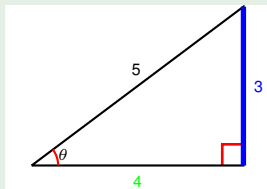
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