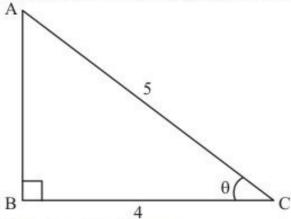


Trigonometric Identities Ex 6.2 Q1

## Answer:

Given: 
$$\cos \theta = \frac{4}{5}$$

Now, we have to find all the other trigonometric ratios. We have the following right angle triangle.



From the above figure,

$$Perpendicular = \sqrt{Hypotenuse^2 - Base^2}$$

$$\Rightarrow AB = \sqrt{AC^2 - BC^2}$$

$$\Rightarrow AB = \sqrt{5^2 - 4^2}$$

$$\Rightarrow AB = 3$$

Therefore,

$$\sin \theta = \frac{AB}{AC} = \frac{3}{5}$$

$$\csc \theta = \frac{AC}{AB} = \frac{5}{3}$$

$$\sec \theta = \frac{AC}{BC} = \frac{5}{4}$$

$$\tan \theta = \frac{AB}{BC} = \frac{3}{4}$$

$$\cot \theta = \frac{BC}{AB} = \frac{4}{3}$$

\*\*\*\*\*\* END \*\*\*\*\*\*\*