Name _____ Date _____

Trigonometric Functions - Step-by-Step Lesson

Given: Cos θ = (4/5), Find: Sin θ

Explanation:

adjacent = 4, hypotenuse = 5
Remember the Pythagorean theorem:
$a^2 + b^2 = c^2$
$(\text{opposite})^2 + (\text{adjacent})^2 = (\text{hypotenuse})^2$

Plug in what you know.
$(\text{opposite})^2 + (\text{adjacent})^2 = (\text{hypotenuse})^2$
$(\text{opposite})^2 + (4)^2 = (5)^2$
$(\text{opposite})^2 = = (5)^2 - (4)^2$
$(\text{opposite})^2 = 25 - 16$

Opposite = $\sqrt{9}$

Opposite = 3

Sin θ = opposite/ hypotenuse

Sin θ = 3/5