

Section 5.2

Solutions and Hints

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for the book:

Precalculus, Mathematics for Calculus 4th Edition
by James Stewart, Lothar Redlin and Saleem Watson.

With the use of calculators, there are “easier” ways to do this section, however you learn much less. Regardless you should do some of these problems. Of particular interest for more advanced classes would be problems 27 to 34.

28. The terminal point $(-3/5, 4/5)$ determined by t is given.

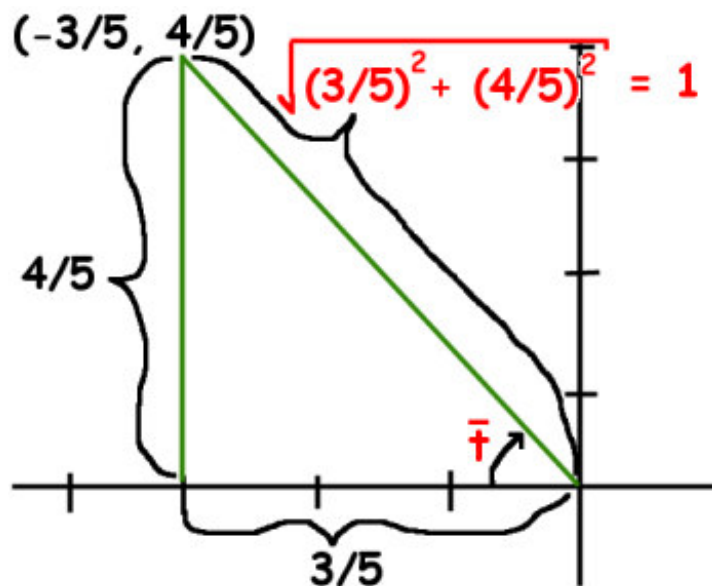
Find $\sin(t)$, $\cos(t)$ and $\tan(t)$.

Consider the picture below and apply:

$\sin = \text{opposite} / \text{hypotenuse}$

$\cos = \text{adjacent} / \text{hypotenuse}$

$\tan = \text{opposite} / \text{adjacent}$ or \sin / \cos



Thus $\sin(t) = \text{opp} / \text{hyp} = (4/5) / 1 = 4/5 = \sin(t)$

$\cos(t) = \text{adj} / \text{hyp} = (3/5) / 1 = 3/5 = \cos(t)$

$\tan(t) = \text{opp} / \text{adj} = (4/5) / (3/5) = 4/3 = \tan(t)$