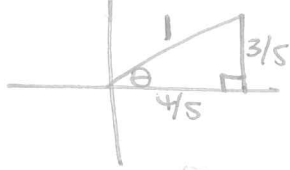


Exact Values - Unit Circle

circle with radius/hypotenuse = 1

The given point P is located on the unit circle. Find sin θ, cos θ, and tan θ.

1) $P(\frac{4}{5}, \frac{3}{5}) \Rightarrow (+, +)$ Q1



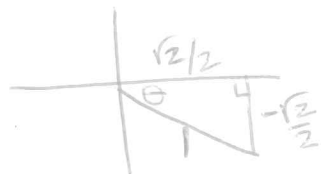
$\sin \theta = \frac{3/5}{1} = \frac{3}{5}$

$\cos \theta = \frac{4/5}{1} = \frac{4}{5}$

$\tan \theta = \frac{3/5}{4/5} = \frac{3}{4}$

2) $P(\frac{1}{2}, \frac{\sqrt{3}}{2})$

3) $P(\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2}) \Rightarrow (+, -)$



$\sin \theta = \frac{-\sqrt{2}/2}{1} = \frac{-\sqrt{2}}{2}$

$\cos \theta = \frac{\sqrt{2}/2}{1} = \frac{\sqrt{2}}{2}$

$\tan \theta = \frac{-\sqrt{2}/2}{\sqrt{2}/2} = -1$

4) $P(0, -1)$

5) $P(-\frac{9}{41}, \frac{40}{41})$

6) $P(-\frac{12}{13}, \frac{5}{13})$

7) $P(-\frac{1}{2}, -\frac{\sqrt{3}}{2})$

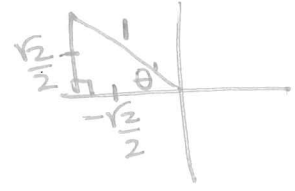
8) $P(1, 0)$

1:1:√2
1:√3:2

→ 30°, 45°, or 60°

State the measure of the reference angle and which quadrant it is located for the given point.

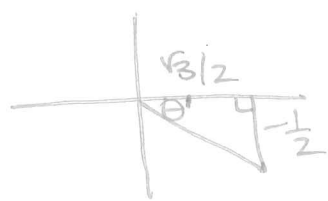
9) $P(-\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2})$



$\theta' = 45^\circ$

10) $P(-\frac{1}{2}, -\frac{\sqrt{3}}{2})$

11) $P(\frac{\sqrt{3}}{2}, -\frac{1}{2})$



$\theta' = 30^\circ$

12) $P(\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2})$