- Trig functions for unit circle angles.

- Right triangle defns.

ex. 3-4-5 5-5-$5\sqrt{2}$

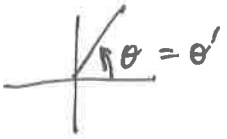
8-15-17 etc.

9-40-41

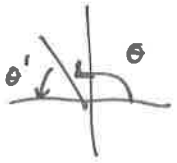
- defns for any angle. (any circle)

- Reference angles!

QI

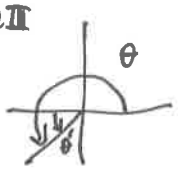


QII



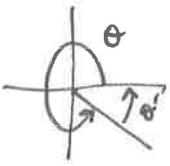
$\theta' = \pi - \theta$

QIII



$\theta' = \theta - \pi$

QIV



$\theta' = 2\pi - \theta$

Use these to find the trig functions for any angle.

ex. $\theta = 300^\circ$, $\theta = -135^\circ$, $\theta = \frac{7\pi}{6}$, $\theta = -\frac{3\pi}{4}$

- Using a calculator, phone, or wolfram.

Ex. $\sin(\theta) = \frac{1}{2}$

Find:

$\sin(-\theta)$

$\csc(-\theta)$

Ex. $\sin(\theta) = \frac{4}{5}$

Find:

$\sin(\pi - \theta)$

$\sin(\pi + \theta)$

Ex. $\cos(\theta) = \frac{3}{5}$

θ is in QIV.

Find the other 5.

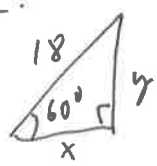
Right Triangle Trig:

Reciprocal Ids

Quotient Ids

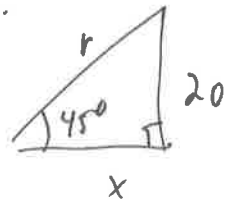
Pythag Ids

Ex.



Find (x, y).

Ex.



Ex. Use ids:

a.) $\tan\alpha \cos\alpha = \sin\alpha$

b.) $(1 + \cos\theta)(1 - \cos\theta) = \sin\theta$

c.) $\frac{\sin\theta}{\cos\theta} + \frac{\cos\theta}{\sin\theta} = \csc\theta \sec\theta$