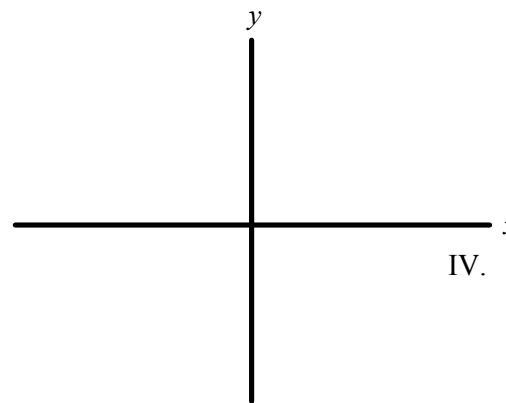
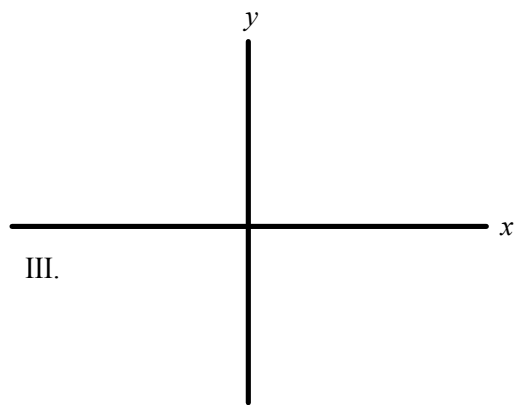
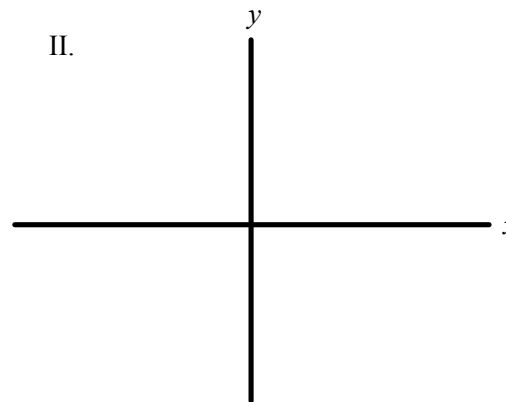
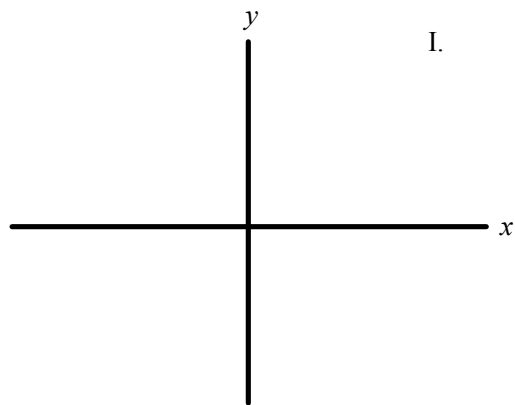


4.3 Trig. Functions on the Unit Circle (Cont.)

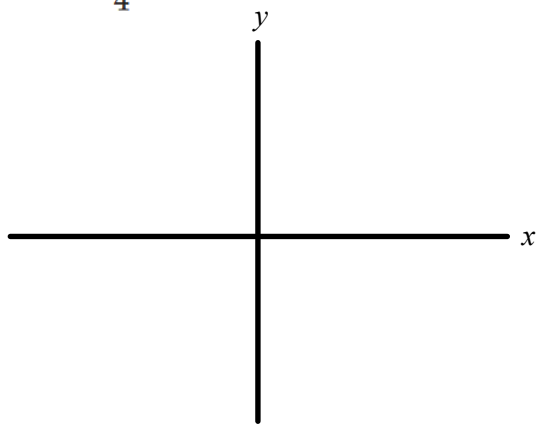
Drawing reference angles in each quadrant:



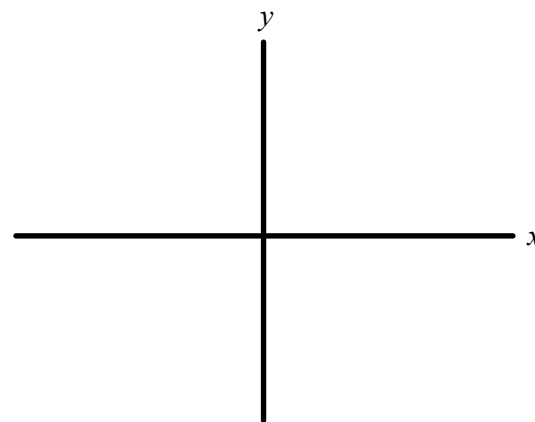
4.3 Trig Functions on the Unit Circle (day 2).notebook

Draw the given angle and determine its reference angle:

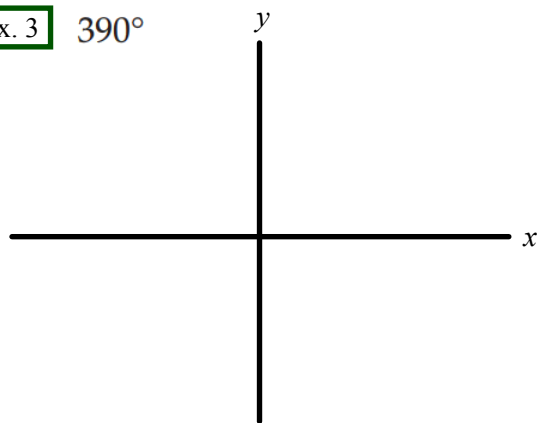
ex. 1 $\frac{5\pi}{4}$



ex. 2 -240°



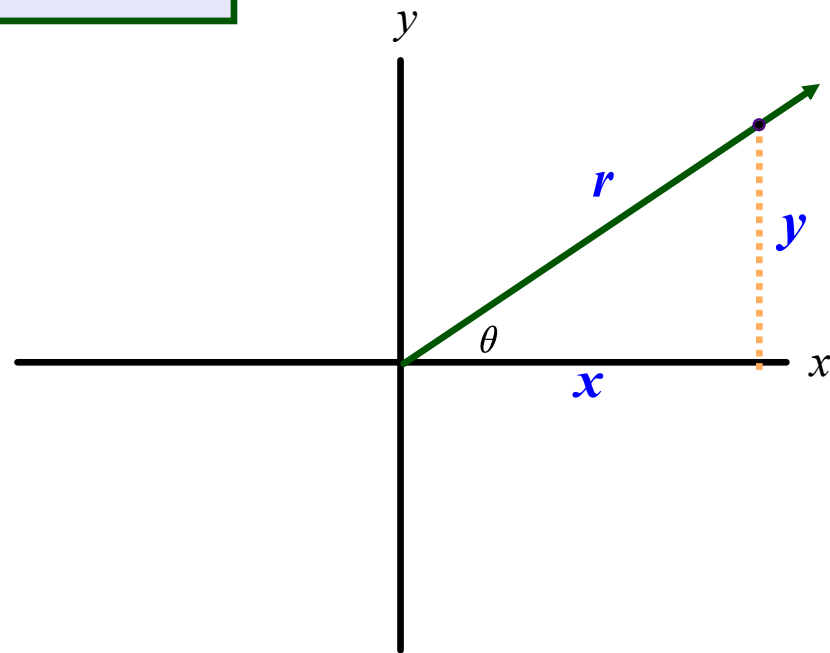
ex. 3 390°



Trig. definitions for any angle in STANDARD POSITION

$$\sin \theta = \frac{y}{r} \quad \cos \theta = \frac{x}{r} \quad \tan \theta = \frac{y}{x}$$

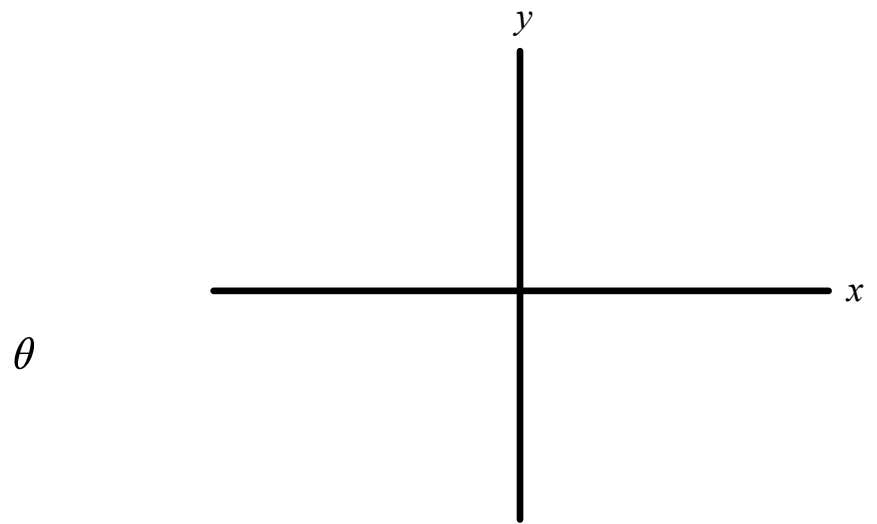
$$\csc \theta = \frac{r}{y} \quad \sec \theta = \frac{r}{x} \quad \cot \theta = \frac{x}{y}$$



4.3 Trig Functions on the Unit Circle (day 2).notebook

Find the exact values of the six trig. functions of θ :

Ex. 1 Through the point $(-4, -3)$



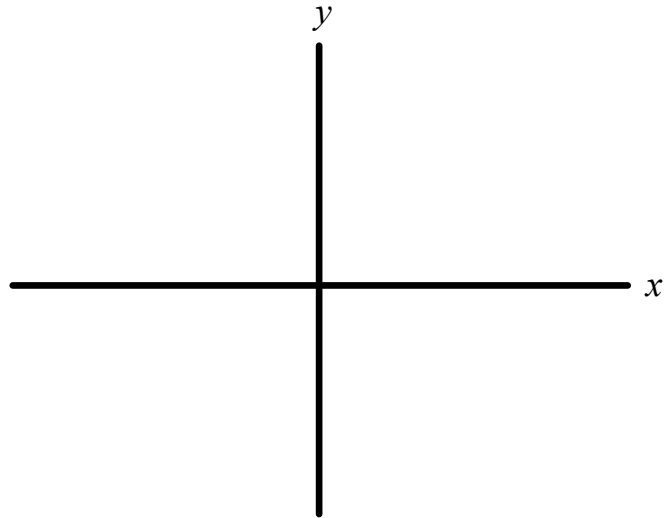
$\sin \theta = \underline{\hspace{2cm}}$ $\csc \theta = \underline{\hspace{2cm}}$

$\cos \theta = \underline{\hspace{2cm}}$ $\sec \theta = \underline{\hspace{2cm}}$

$\tan \theta = \underline{\hspace{2cm}}$ $\cot \theta = \underline{\hspace{2cm}}$

Find the exact values of the six trig. functions of θ :

Ex. 2 Through the point (3, -2)



θ

$\sin \theta = \underline{\hspace{2cm}}$ $\csc \theta = \underline{\hspace{2cm}}$

$\cos \theta = \underline{\hspace{2cm}}$ $\sec \theta = \underline{\hspace{2cm}}$

$\tan \theta = \underline{\hspace{2cm}}$ $\cot \theta = \underline{\hspace{2cm}}$

4.3 Trig Functions on the Unit Circle (day 2).notebook

$$\sin \theta = \frac{y}{r} \quad \cos \theta = \frac{x}{r} \quad \tan \theta = \frac{y}{x}$$

$$\csc \theta = \frac{r}{y} \quad \sec \theta = \frac{r}{x} \quad \cot \theta = \frac{x}{y}$$

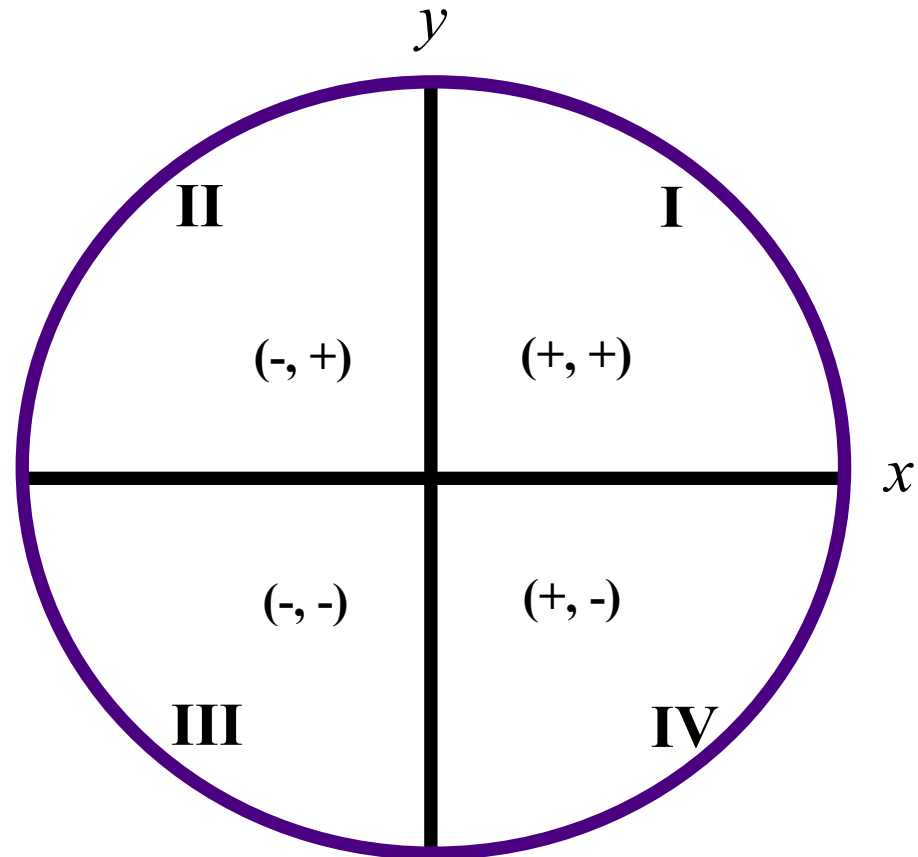
Name the quadrant in which the angle lies:

1. $\sin \theta < 0, \cos \theta > 0$ _____

2. $\cos \theta > 0, \tan \theta > 0$ _____

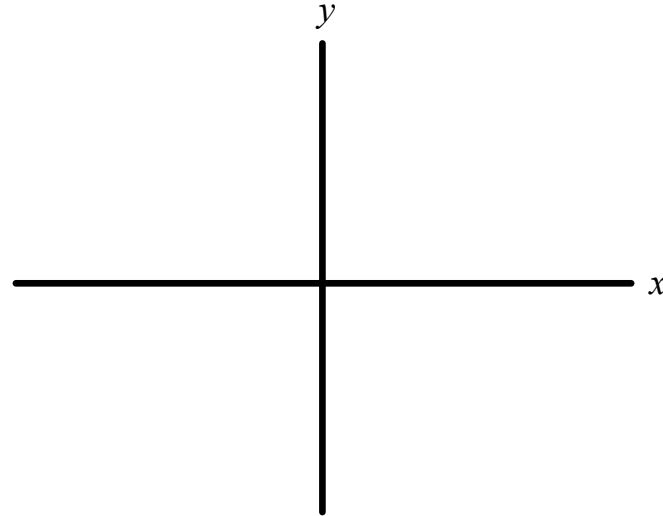
3. $\cos \theta < 0, \tan \theta > 0$ _____

4. $\csc \theta > 0, \cos \theta < 0$ _____

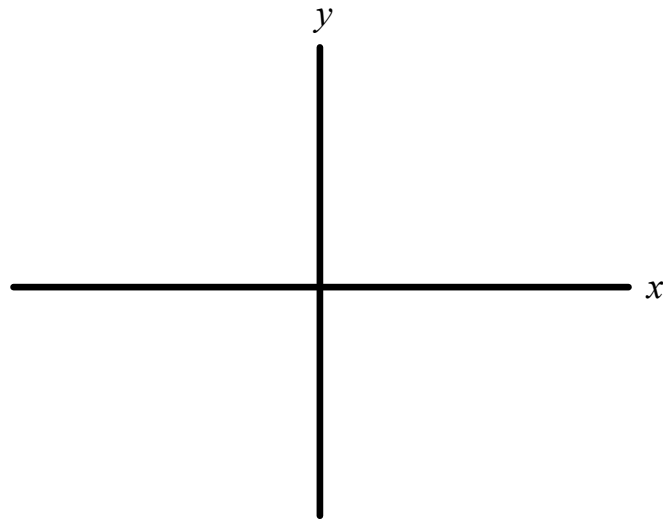


Find the exact values of the five remaining trigonometric functions of θ .

ex. 1 $\sec \theta = \sqrt{3}, \tan \theta < 0$



ex. 2 $\sin \theta = \frac{5}{7}, \cot \theta > 0$



Assignment:

pg. 251 (1-40, 43-58) all

4.3 Trig Functions on the Unit Circle (day 2).notebook