

Mastery Check

1)

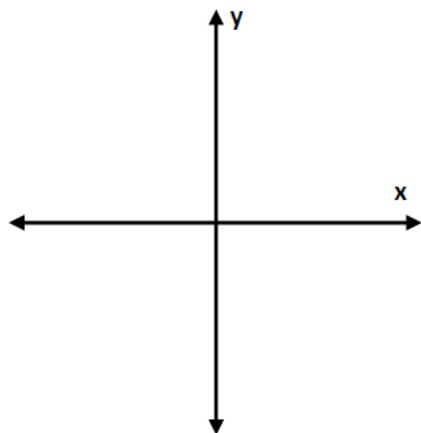
Evaluate the sine, cosine, and tangent of the angle without using a calculator.

300°

$\sin 300^\circ =$

$\cos 300^\circ =$

$\tan 300^\circ =$



2)

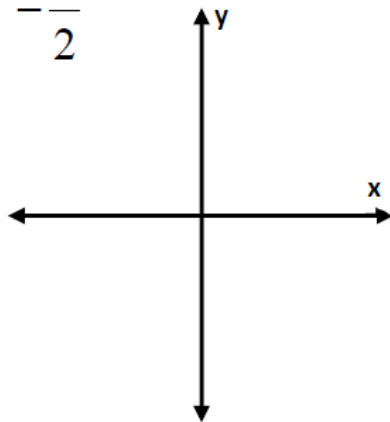
Evaluate the sine, cosine, and tangent of the angle without using a calculator.

$-\frac{\pi}{2}$

$\sin\left(-\frac{\pi}{2}\right) =$

$\cos\left(-\frac{\pi}{2}\right) =$

$\tan\left(-\frac{\pi}{2}\right) =$



Don't yell out the answer!!!

Riddle:

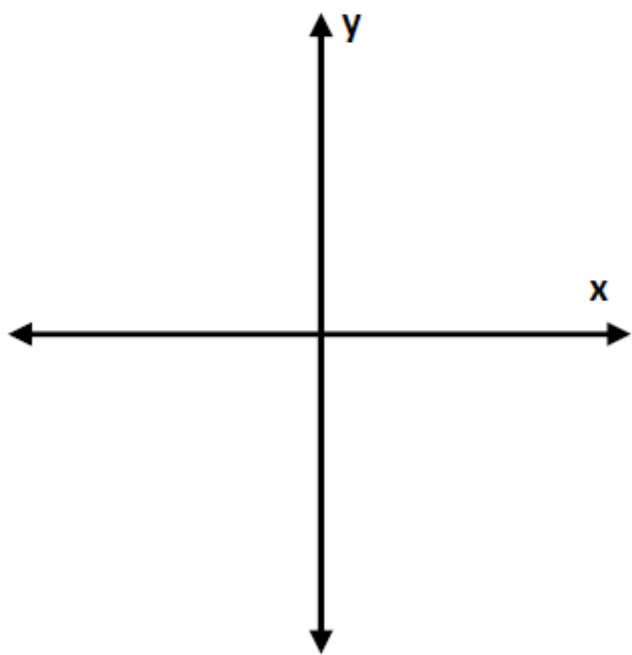
What comes once in a minute, twice in a moment, but never in a thousand years?

Pg. 312 4.4B – Trigonometric Functions of Any Angle

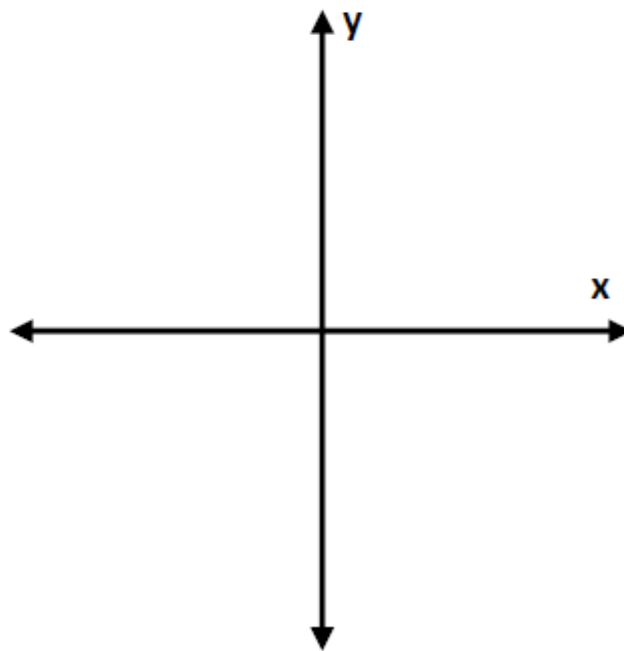
Ex 1:

State the quadrant in which θ lies.

a) $\sin \theta < 0$ and $\cos \theta < 0$



b) $\sec \theta > 0$ and $\cot \theta < 0$



Ex 2:

Find the values of the six trigonometric functions of θ with the given constant.

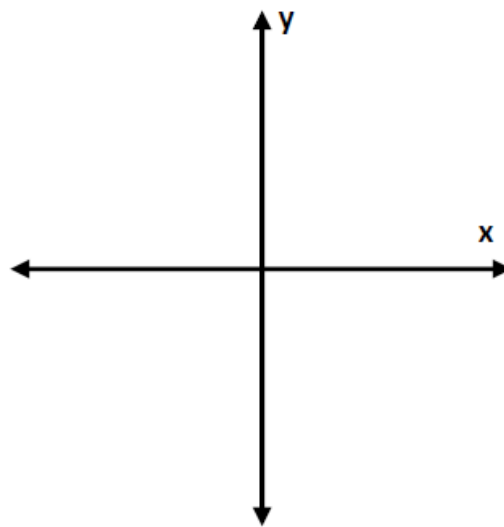
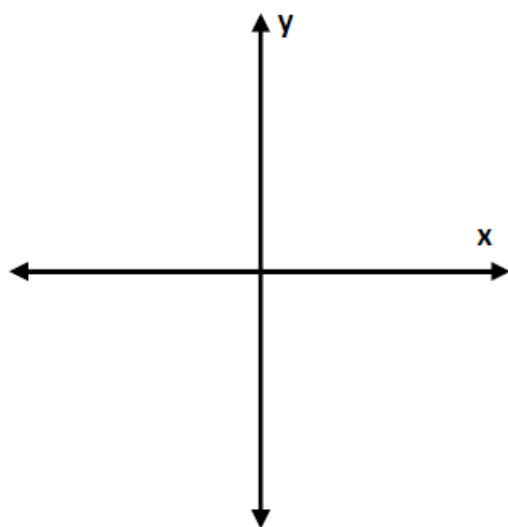
a) Function Value**Constraint****b) Function Value****Constraint**

$$\cos \theta = \frac{8}{17}$$

$$\tan \theta < 0$$

$$\tan \theta \text{ is undefined}$$

$$\pi \leq \theta \leq 2\pi$$



$$\sin \theta =$$

$$\cos \theta =$$

$$\tan \theta =$$

$$\sin \theta =$$

$$\cos \theta =$$

$$\tan \theta =$$

$$\csc \theta =$$

$$\sec \theta =$$

$$\cot \theta =$$

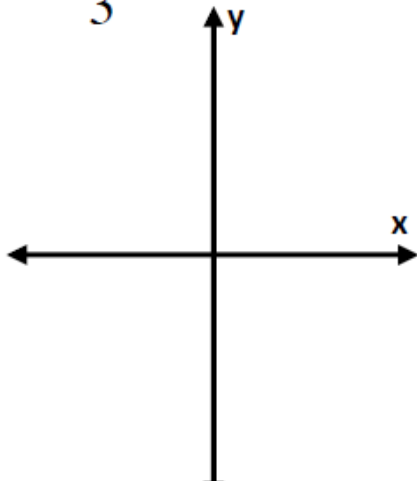
$$\csc \theta =$$

$$\sec \theta =$$

$$\cot \theta =$$

Ex 3:

The terminal side of θ lies on the given line in the specified quadrant. Find the values of the six trigonometric functions θ of by finding a point on the line.

| Line | Quadrant | | | |
|--|----------|-----------------|-----------------|-----------------|
| $y = \frac{1}{3}x$ | III | $\sin \theta =$ | $\cos \theta =$ | $\tan \theta =$ |
|  | | $\csc \theta =$ | $\sec \theta =$ | $\cot \theta =$ |

Ex 4:



Find the indicated trigonometric value in the specified quadrant.

Function

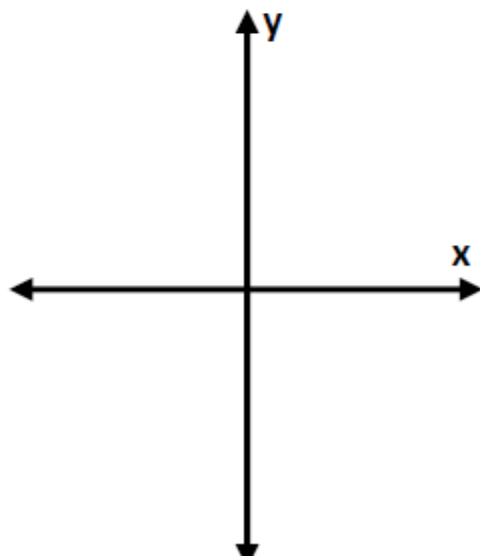
Quadrant

Trigonometric Value

$$\cot \theta = -3$$

II

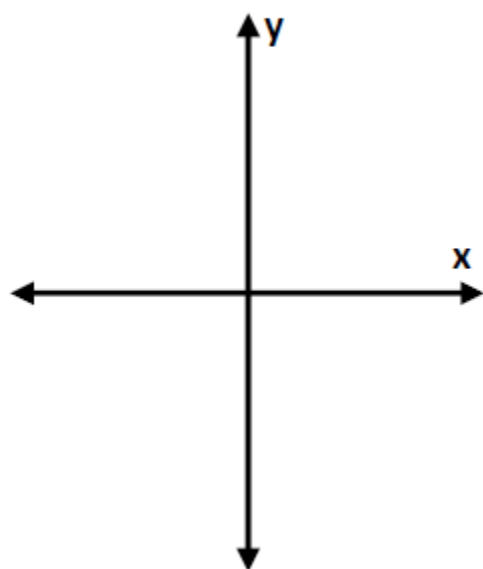
$$\cos \theta$$



Ex 5:

Find two solutions of the equation. Give your answers in degrees and in radians.

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



Assignment 4.4B

Pg. 318 **REQUIRED**: Problem Set #'s 11-27 ODD, 59-85 ODD