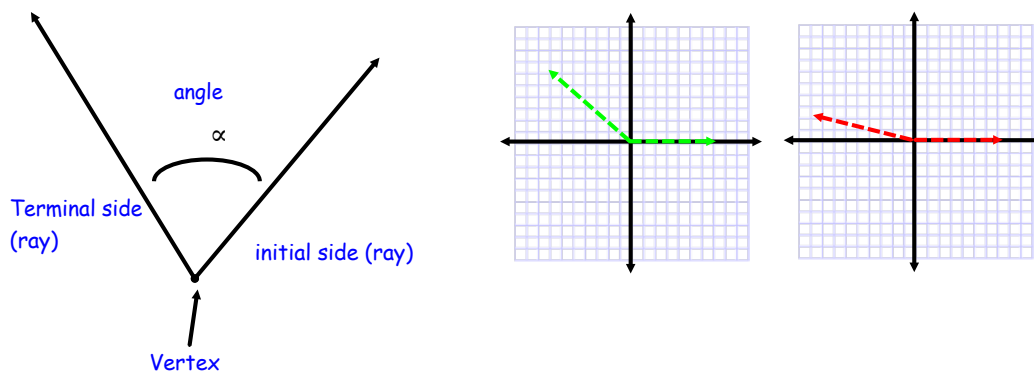## 4.3 Day 1- Trigonometry Extendend

Vocabulary Review:

coterminal angles: angles in standard position with the same terminal ray
example

Find a positive and negative angle that are coterminal with

-150° $\dfrac{2\pi}{3}$

Let θ be the acute angle in stander position whose terminal side contains the point (5, 3). Find all the trigonometric functions.
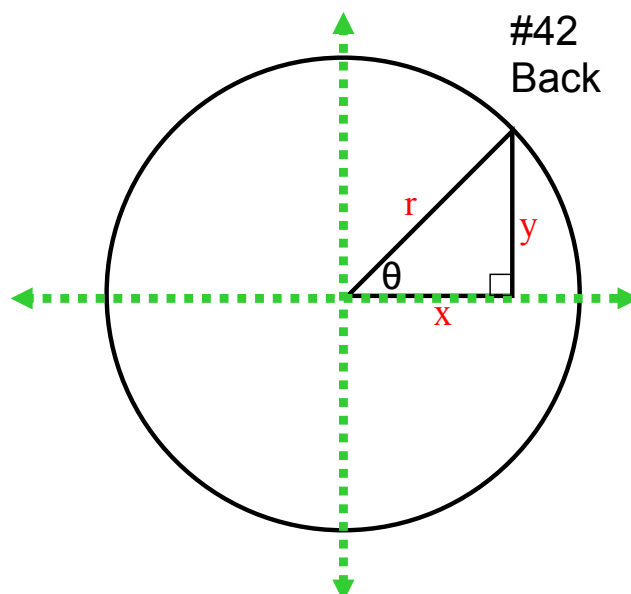
Let θ be the acute angle in stander position whose terminal side contains the point (-5, 3). Find all the trigonometric functions.
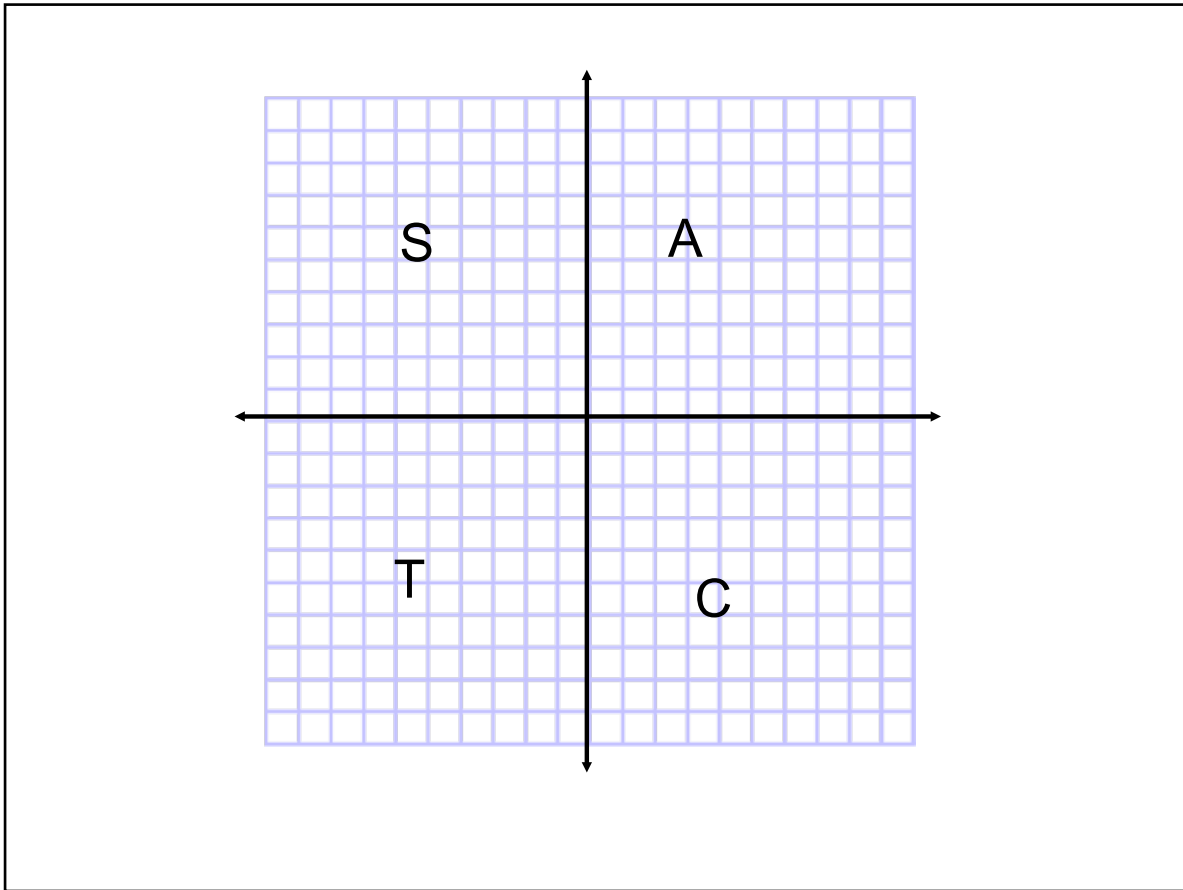
$$\sin\theta = \frac{opp}{hyp} = \frac{y}{r}$$

$$\cos\theta = \frac{adj}{hyp} = \frac{x}{r}$$

$$\tan\theta = \frac{opp}{adj} = \frac{y}{x}$$

#42
Back

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

S | A

T | C

Give the sign without using a calculator

$$\left(\frac{\pi}{2}, \pi\right) \qquad \sin\theta \quad \cos\theta \quad \tan\theta$$
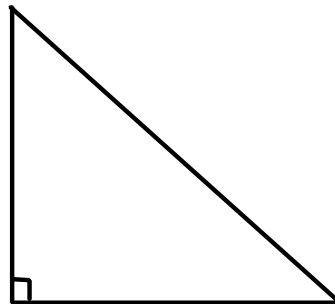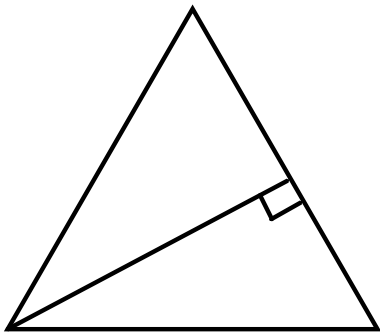
$$\tan 192°$$

Choose a point on the terminal side of $\theta = \dfrac{2\pi}{3}$

$(-1, 1)$
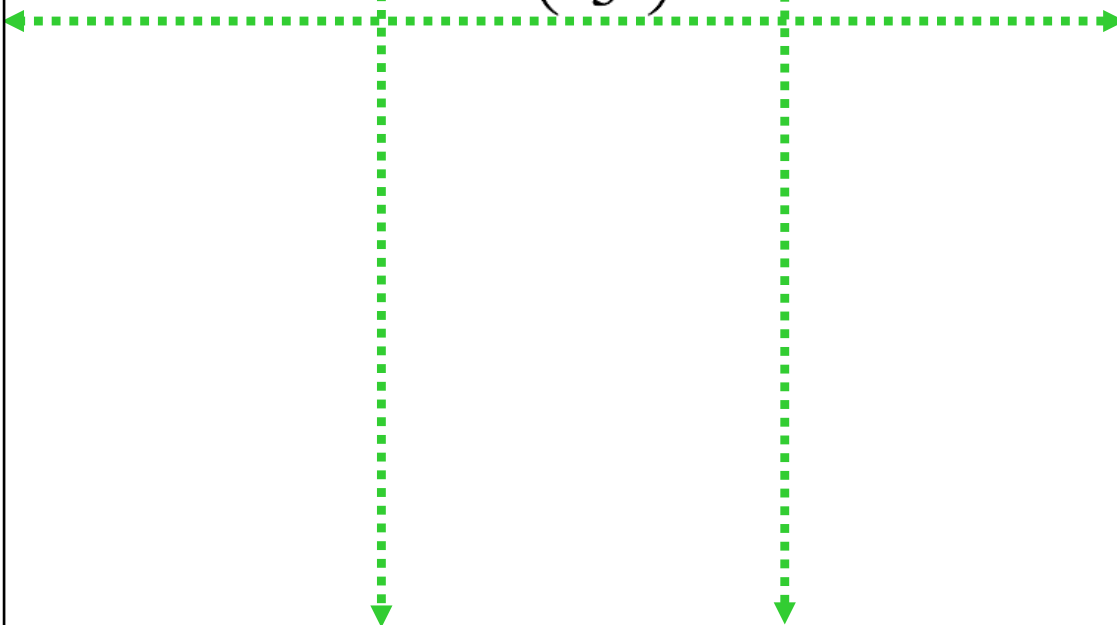
$(-1, \sqrt{3})$

$(-\sqrt{3}, 1)$

Special Triangles

Find the following without a calculator:

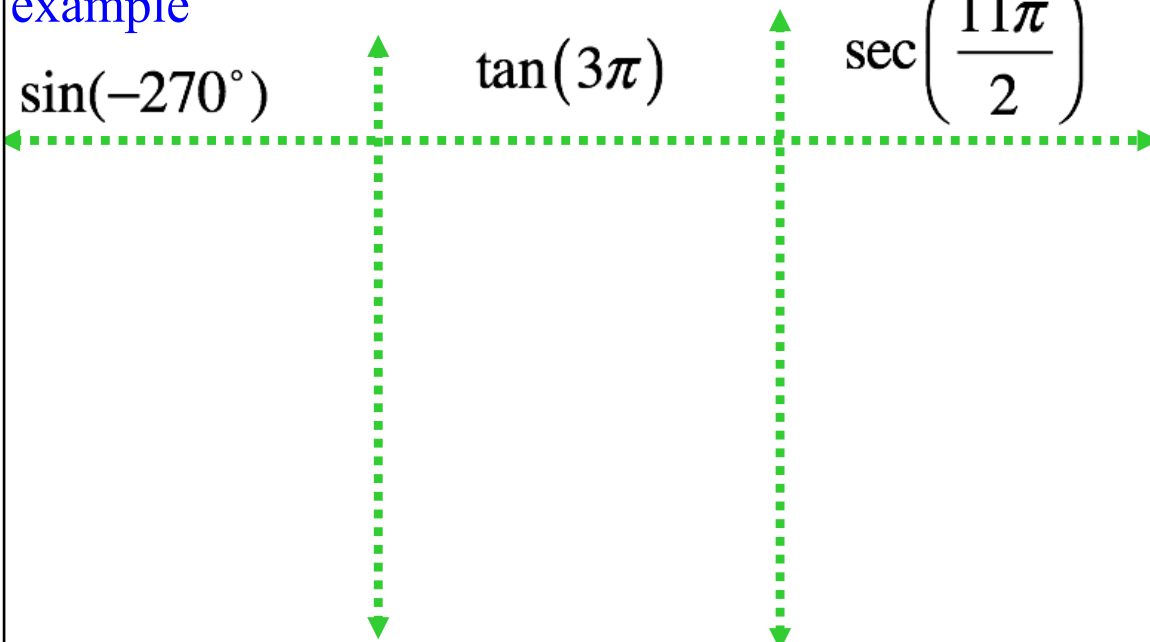$$\sin(-210°) \qquad \tan\left(\frac{5\pi}{3}\right) \qquad \sec\left(\frac{-3\pi}{4}\right)$$

quadrantal angles: angles with the
terminal ray on one of the axes

example

$$\sin(-270°) \qquad \tan(3\pi) \qquad \sec\left(\frac{11\pi}{2}\right)$$

Find $\cos\theta$ and $\tan\theta$ by using the given information to construct a reference triangle

$\sin\theta = \dfrac{3}{7}$ $\tan\theta < 0$ $\sec\theta = 3$ $\sin\theta > 0$