

# Unit Circle

$$\sin \theta = \frac{\text{opp}}{\text{hyp}}$$

$$\csc \theta = \frac{\text{hyp}}{\text{opp}}$$

$$\cos \theta = \frac{\text{adj}}{\text{hyp}}$$

$$\sec \theta = \frac{\text{hyp}}{\text{adj}}$$

$$\tan \theta = \frac{\text{opp}}{\text{adj}}$$

$$\cot \theta = \frac{\text{adj}}{\text{opp}}$$

## Quadrant Angles

(use points (x,y))

$$\sin \theta = y$$

$$\csc \theta = \frac{1}{y}$$

$$\cos \theta = x$$

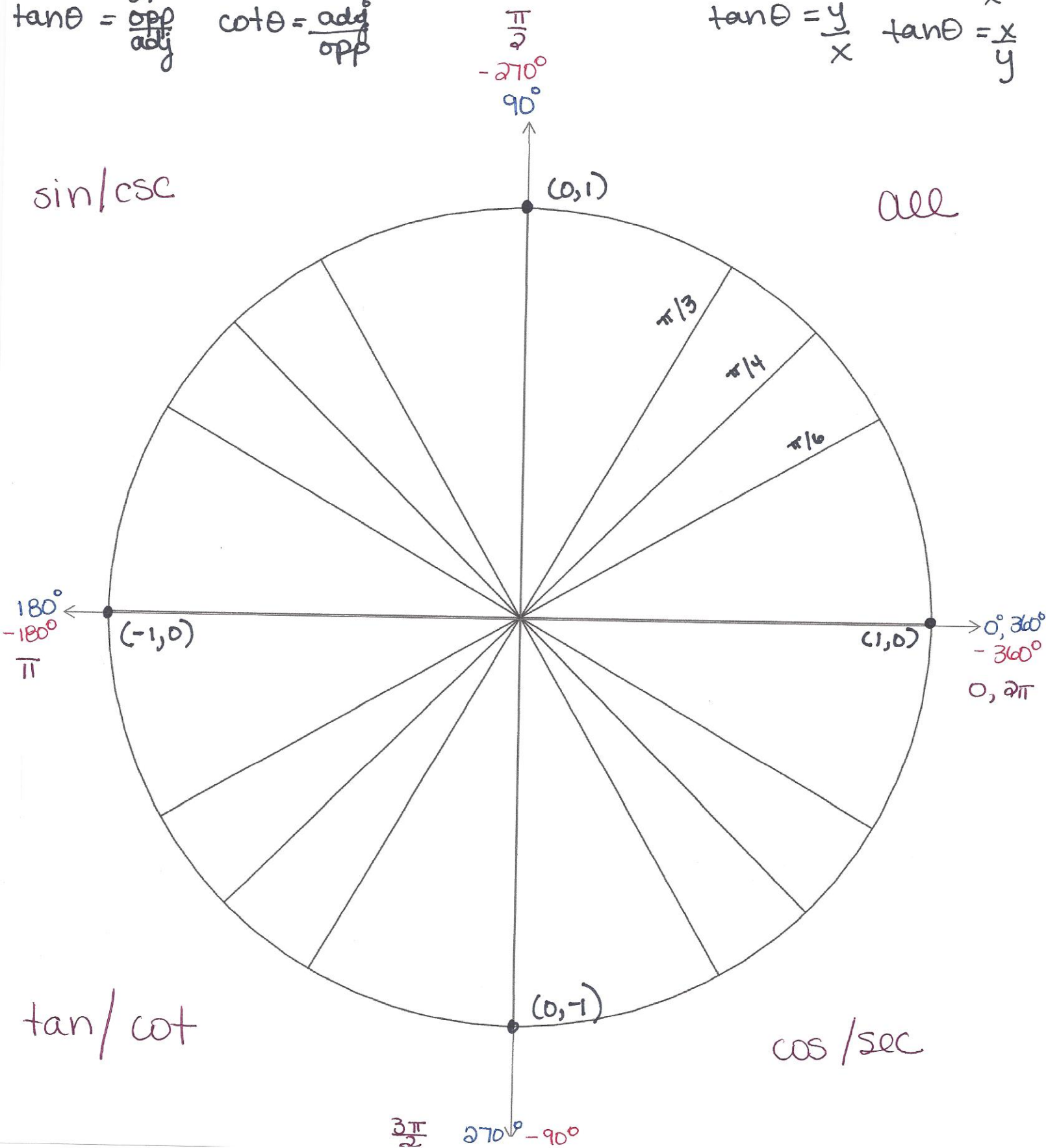
$$\sec \theta = \frac{1}{x}$$

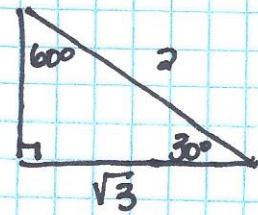
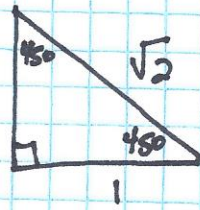
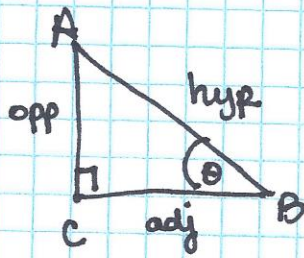
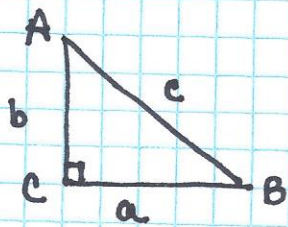
$$\tan \theta = \frac{y}{x}$$

$$\cot \theta = \frac{x}{y}$$

sin/csc

all





### Find exact trig values

- ① Sketch angle
- ② Find reference angle (closest x axis)  
Creat  $\triangle$
- ③ Label  $\triangle$  twice  
①  $\sigma, a, h$  ② #'s
- ④ Trig ratio
- ⑤ Check sign

### Quadrant angles

use 4 points (x,y) from unit circle.

- Degree  $\rightarrow$  Radian  $\times \frac{\pi}{180}$
- Radian  $\rightarrow$  Degree  $\times \frac{180}{\pi}$

