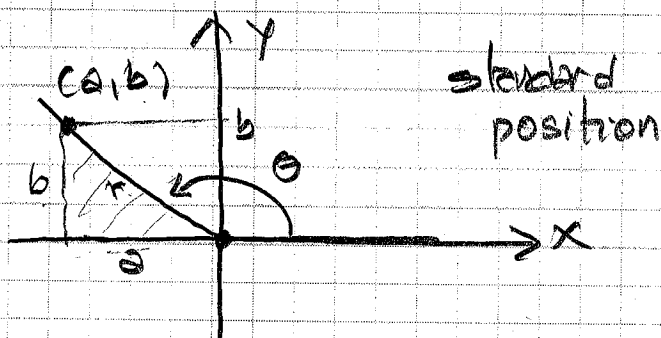
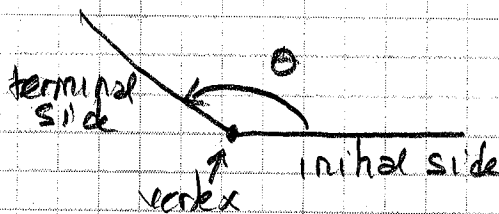
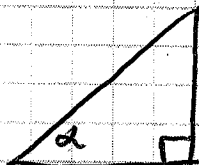


TRIGONOMETRIC FUNCTIONS OF GENERAL ANGLES (ACUTE OR NOT)



$$\sin \theta = \frac{b}{r}$$

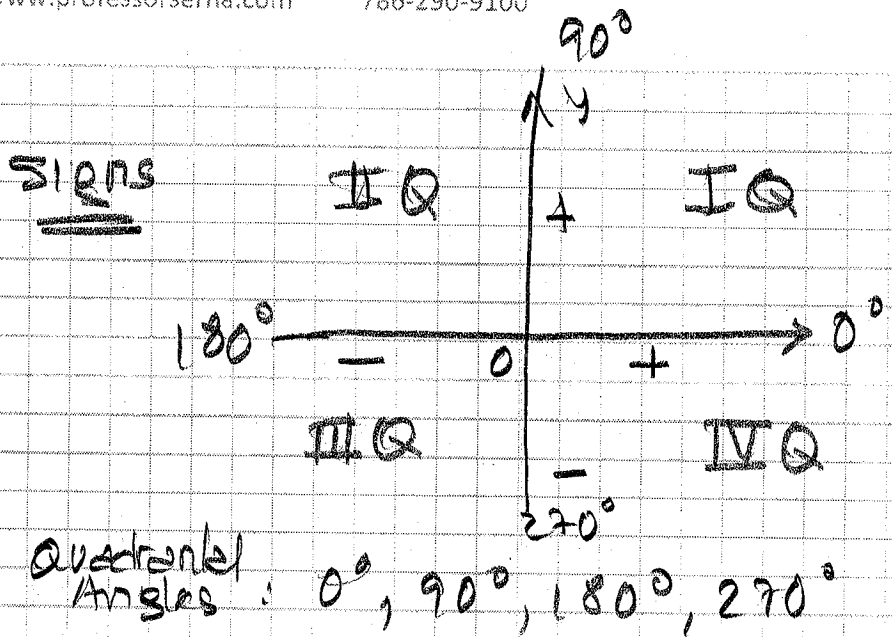
$$\cos \theta = \frac{a}{r}$$

$$\tan \theta = \frac{b}{a}$$

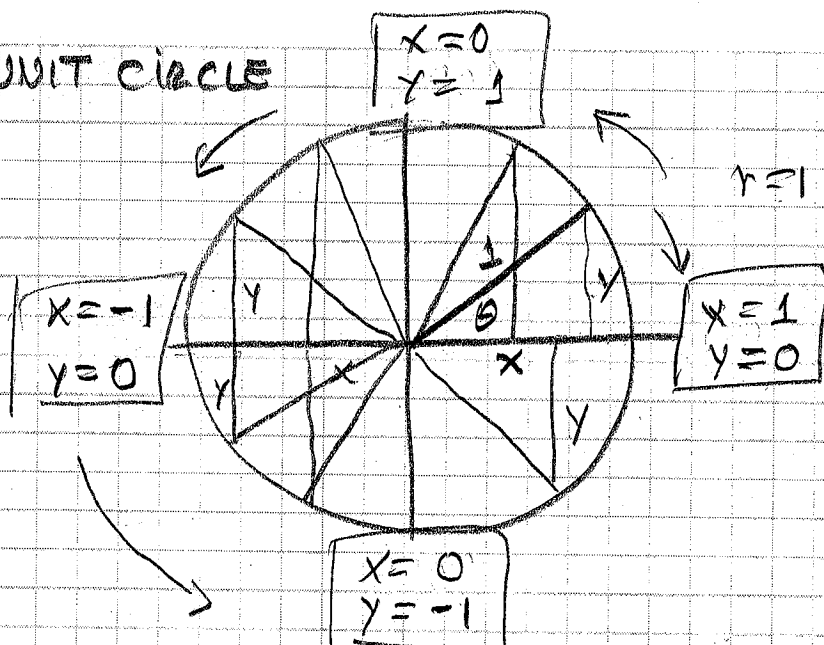
$$\cot \theta = \frac{a}{b}$$

$$\sec \theta = \frac{r}{a}$$

$$\csc \theta = \frac{r}{b}$$



THE UNIT CIRCLE



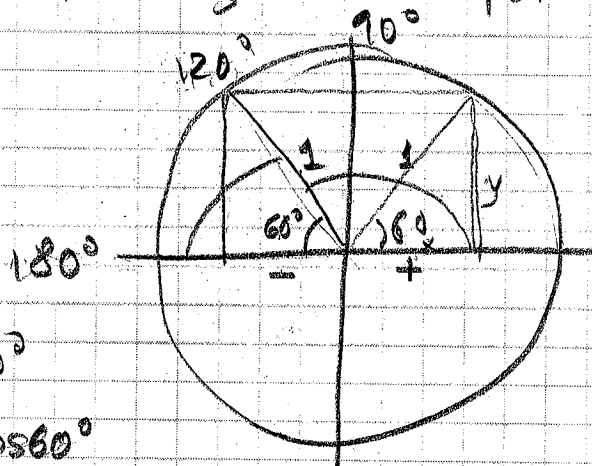
$$\sin 0^\circ = y = 0$$

$$\tan 90^\circ = \frac{y}{x} = \frac{1}{0} = \text{undefined}$$

$$\tan 180^\circ = \frac{y}{x} = \frac{0}{-1} = 0$$

$\tan \theta$ negative in **IV** \odot

Example: Find the trigonometric functions of $\theta = 120^\circ$



$$\sin 120^\circ = \sin 60^\circ$$

$$\cos 120^\circ = -\cos 60^\circ$$

$$\tan 120^\circ = -\tan 60^\circ$$

"Reference Angle"