

Trigonometric Signs in Different Quadrants

Name _____

Date _____ Period _____

Let θ be an angle in standard position and $P(x,y)$ lie on the terminal side of θ and on the circle $x^2 + y^2 = r^2$, then...

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

$$\csc \theta = \frac{r}{y} \quad y \neq 0$$

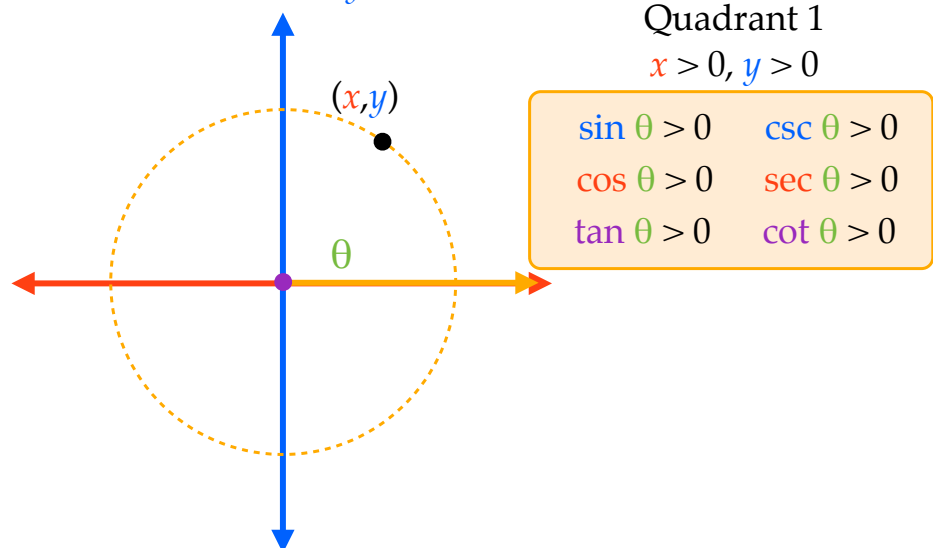
$$\cos \theta = \frac{x}{r}$$

$$\sec \theta = \frac{r}{x} \quad x \neq 0$$

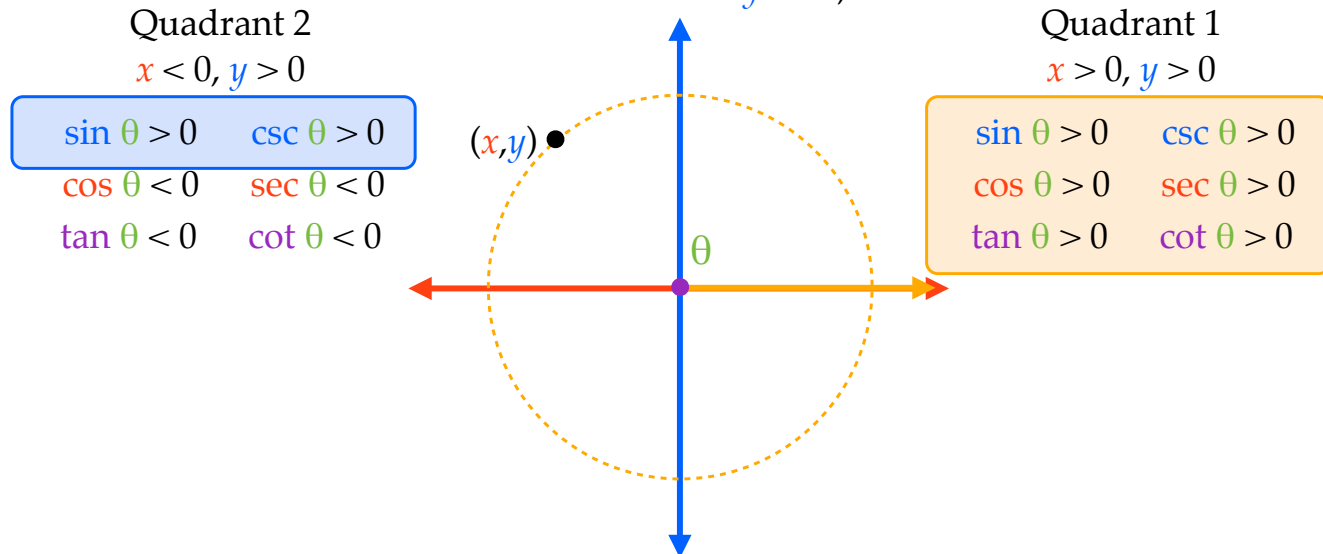
$$\tan \theta = \frac{y}{x} \quad x \neq 0$$

$$\cot \theta = \frac{x}{y} \quad y \neq 0$$

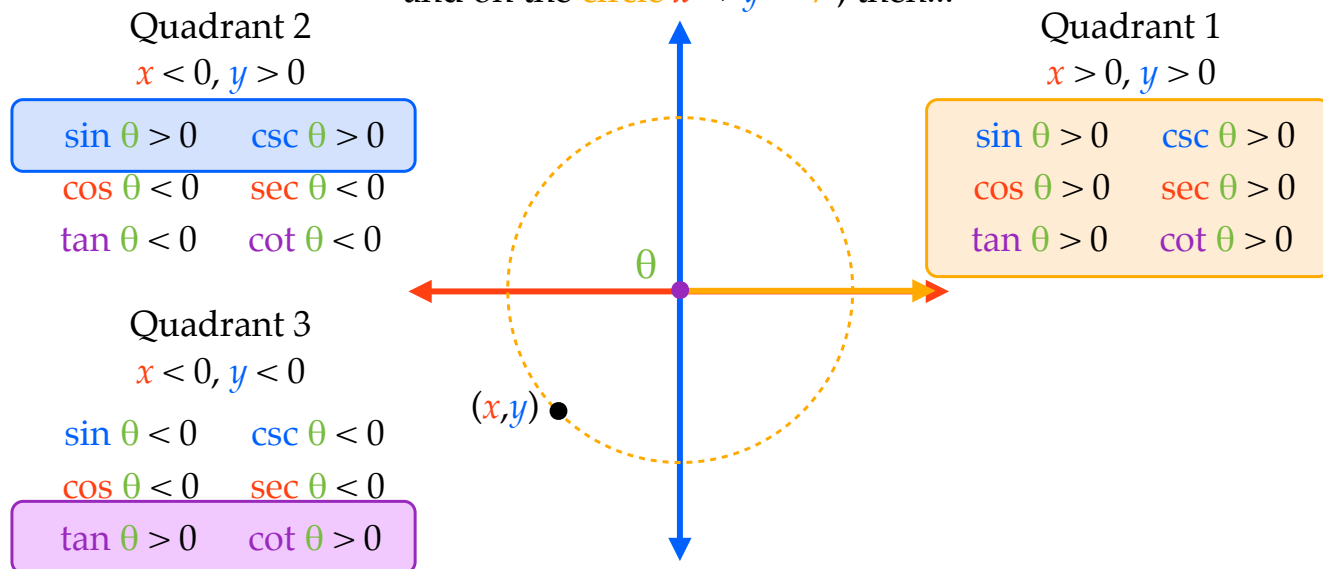
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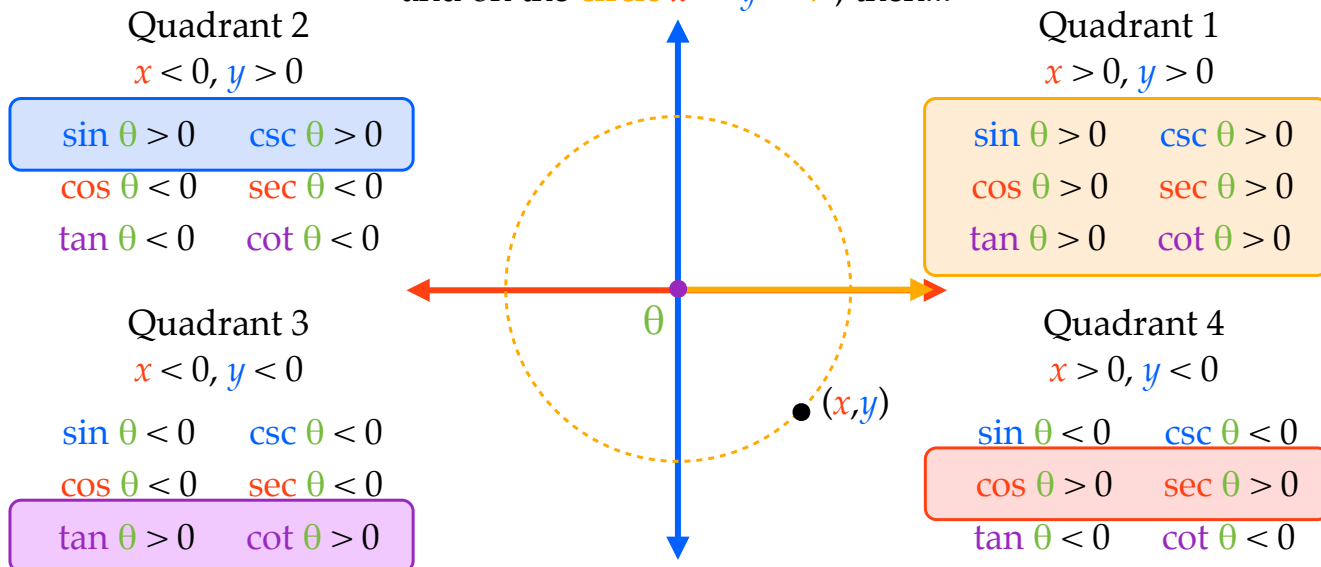
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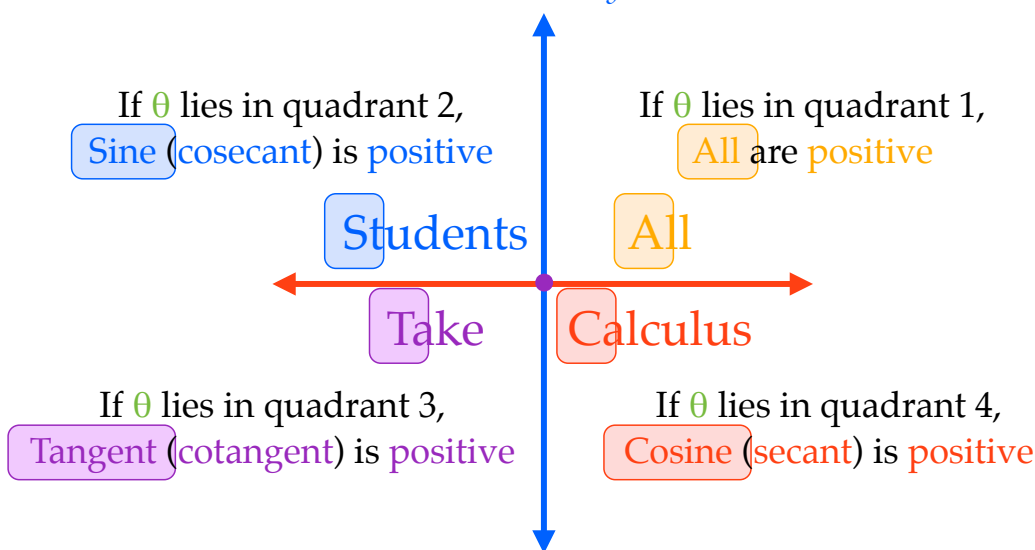
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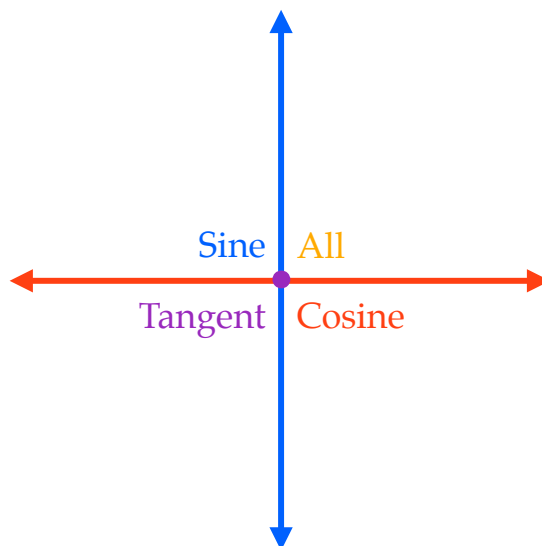
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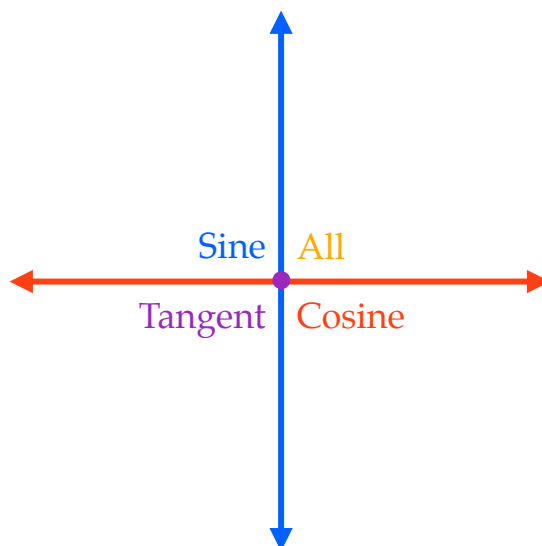
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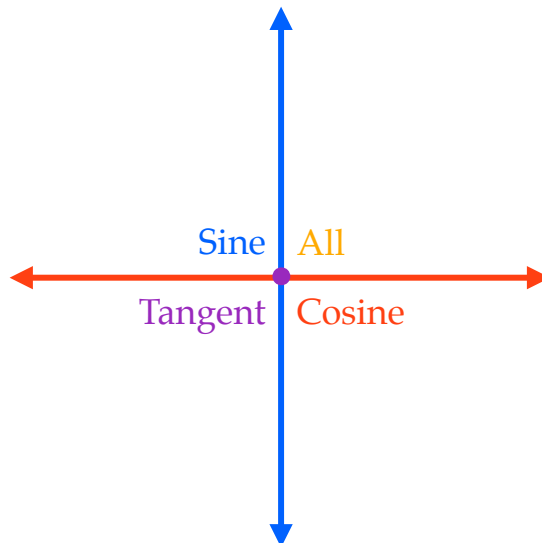
Given $\sin \theta > 0$ and $\cos \theta < 0$, in which quadrant does θ lie?



Given $\tan \theta > 0$ and $\sin \theta < 0$, in which quadrant does θ lie?



Given $\csc \theta < 0$ and $\sec \theta > 0$, in which quadrant does θ lie?



Given $\sec \theta < 0$ and $\cot \theta < 0$, in which quadrant does θ lie?

