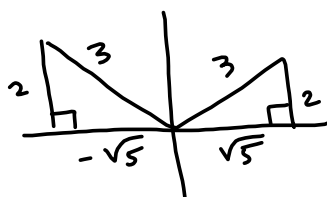


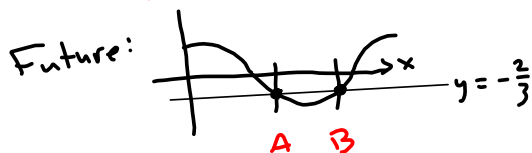
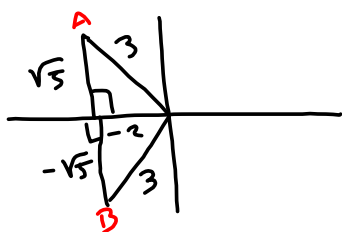
Pictures for Trig Equations:

$$\sin \theta = \frac{2}{3}$$

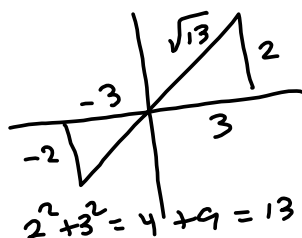


$$3^2 - 2^2 = 9 - 4 = 5$$

$$\cos \theta = -\frac{2}{3}$$

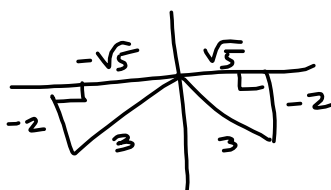


$$\tan \theta = \frac{2}{3} = \frac{y}{x}$$

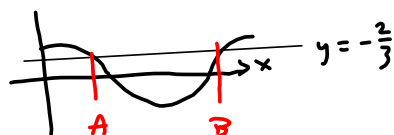
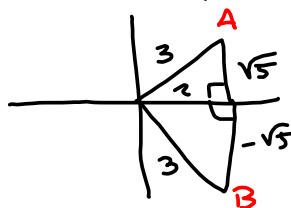


$$2^2 + 3^2 = 4 + 9 = 13$$

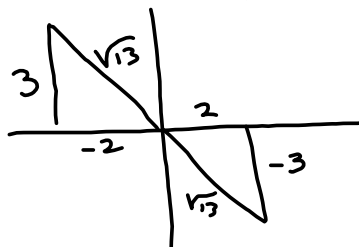
$$\sin \theta = -\frac{2}{3}$$



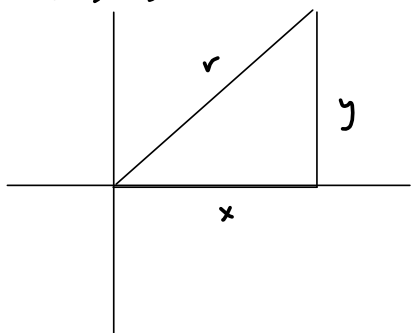
$$\cos \theta = \frac{2}{3}$$



$$\tan \theta = -\frac{2}{3}$$



By Pythagorean Theorem!

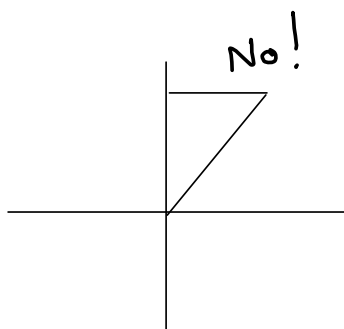
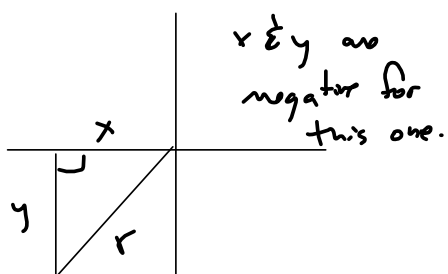


$$\sqrt{x^2 + y^2} = r$$

$$x^2 + y^2 = r^2$$

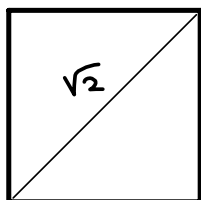
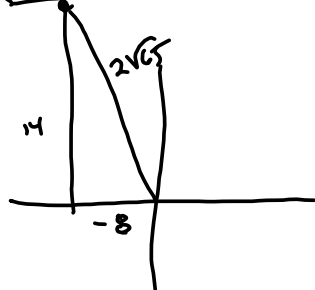
$$r^2 - x^2 = y^2 \Rightarrow \sqrt{r^2 - x^2} = \pm y$$

$$r^2 - y^2 = x^2 \Rightarrow x = \pm \sqrt{r^2 - y^2}$$



All we're given.

(-8, 14)



$$\sin \theta = \frac{14}{2\sqrt{65}} = \frac{7}{\sqrt{65}}$$

$$\cos \theta = \frac{-8}{2\sqrt{65}} = \frac{-4}{\sqrt{65}}$$

$$\tan \theta = \frac{14}{-8} = -\frac{7}{4}$$

$$\csc \theta = \frac{\sqrt{65}}{7}$$

$$\sec \theta = -\frac{\sqrt{65}}{4}$$

$$\cot \theta = -\frac{4}{7}$$

$$8^2 + 14^2 = 64 + 196 = 260$$

$$\sqrt{260} = 2\sqrt{65}$$

S.4#9

$$\sin \theta < 0, \cos \theta < 0$$

