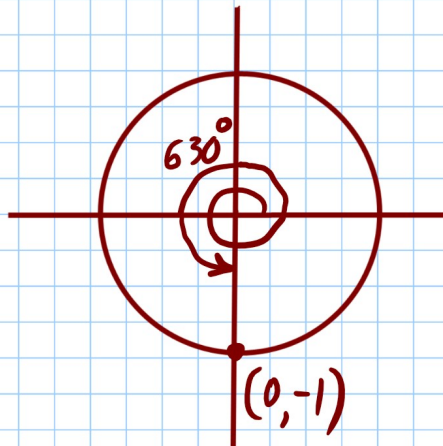


WARMUP

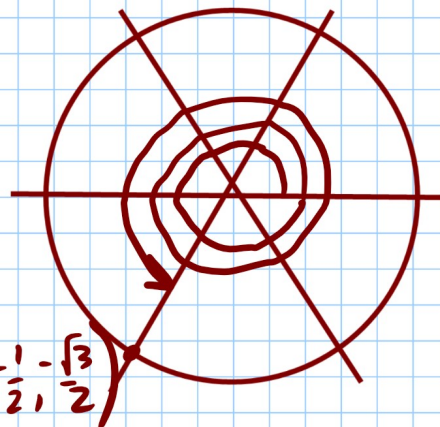
Using your unit circle find exact values of:

1) $\sec 330^\circ$

$$\begin{aligned} &= \frac{1}{x} = \frac{1}{\frac{\sqrt{3}}{2}} = \frac{2}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} \\ &= \frac{2\sqrt{3}}{3} \end{aligned}$$



3) $\sin\left(-\frac{3\pi}{4}\right) = y = -\frac{\sqrt{2}}{2}$



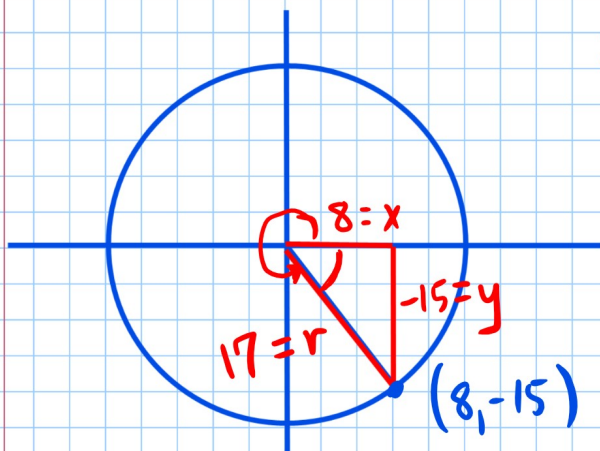
2) $\cot 630^\circ = \frac{x}{y}$

$$= \frac{0}{-1} = 0$$

4) $\cos\left(\frac{16\pi}{3}\right) = x = -\frac{1}{2}$

Section 5.2

The terminal side of θ passes through the point $(8, -15)$. Find the six trig function values of θ .



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

$$8^2 + (-15)^2 = r^2$$

$$64 + 225 = r^2$$

$$\sqrt{289} = \sqrt{r^2}$$

$$r = 17$$

If we're Not on the unit circle:
 $\sin\theta = \frac{y}{r}$ $\csc\theta = \frac{r}{y}$

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

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

R IS ALWAYS POSITIVE

$$\sin \theta = -\frac{15}{17}$$

$$\csc \theta = -\frac{17}{15}$$

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odd

$$\cos \theta = \frac{8}{17}$$

$$\sec \theta = \frac{17}{8}$$

$$\tan \theta = -\frac{15}{8}$$

$$\cot \theta = -\frac{8}{15}$$

For calculator ones

$$61) \sec 41^\circ = \frac{1}{\cos 41^\circ} = 1.33$$

↑
degree mode

1 / cos(41) enter

$$65) \tan \frac{5\pi}{12} = \tan(5\pi/12) \text{ enter} = 3.73$$

↑
radian mode