IF POINT IS ON UNIT CIRCLE

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

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

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

3. $\sin\frac{\pi}{3}$

sin is y

$= \frac{\sqrt{3}}{2}$

4. $\sec\frac{3\pi}{4}$

sec is $\frac{1}{x}$

$= \frac{1}{\frac{-\sqrt{2}}{2}}$

$= \frac{2}{-\sqrt{2}}$

$= \frac{2\sqrt{2}}{-\sqrt{2}\sqrt{2}}$

$= \frac{-2\sqrt{2}}{2}$

$= -\sqrt{2}$

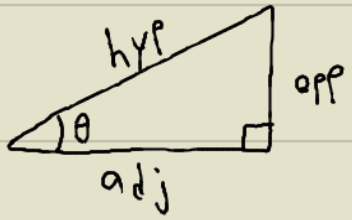
5. $\cos\frac{13\pi}{4}$

$\cos\left(\frac{13\pi}{4} - 2\pi\right)$

$\cos\left(\frac{5\pi}{4}\right)$

* cos is x

$= \frac{-\sqrt{2}}{2}$



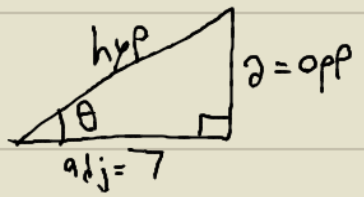
$opp^2 + adj^2 = hyp^2$

$\sin\theta = \frac{opp}{hyp}$ $\quad \csc\theta = \frac{hyp}{opp}$

$\cos\theta = \frac{adj}{hyp}$ $\quad \sec\theta = \frac{hyp}{adj}$

$\tan\theta = \frac{opp}{adj}$ $\quad \cot\theta = \frac{adj}{opp}$

6.



$opp^2 + adj^2 = hyp^2$

$2^2 + 7^2 = hyp^2$

$4 + 49 = hyp^2$

$53 = hyp^2$

$hyp = \sqrt{53}$

$\sin\theta = \frac{opp}{hyp} = \frac{2}{\sqrt{53}} = \frac{2\sqrt{53}}{53}$ $\quad \csc\theta = \frac{\sqrt{53}}{2}$

$\cos\theta = \frac{adj}{hyp} = \frac{7}{\sqrt{53}} = \frac{7\sqrt{53}}{53}$ $\quad \sec\theta = \frac{\sqrt{53}}{7}$

$\tan\theta = \frac{opp}{adj} = \frac{2}{7}$ $\quad \cot\theta = \frac{7}{2}$