Angles in Standard Position: NAME Key

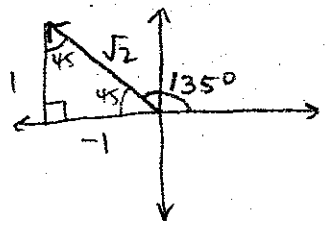
1) Find the trigonometric function values for −945°. Include values and appropriate signs.

$-945° + 360 + 360 + 360 = 135°$

$\sin 135° = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$ $\csc 135° = \sqrt{2}$

$\cos 135° = \frac{-1}{\sqrt{2}} = \frac{-\sqrt{2}}{2}$ $\sec 135° = -\sqrt{2}$

$\tan 135° = -1$ $\cot 135° = -1$



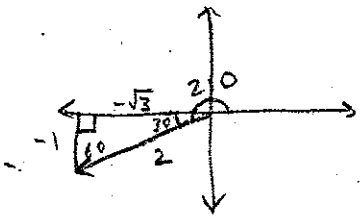
2) Find the trigonometric function values for 570°. Include values and appropriate signs.

$570° = 210°$

$\sin 210° = -\frac{1}{2}$ $\csc 210° = -2$

$\cos 210° = -\frac{\sqrt{3}}{2}$ $\sec 210° = \frac{-2}{\sqrt{3}} = -\frac{2\sqrt{3}}{3}$

$\tan 210° = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$ $\cot 210° = \sqrt{3}$



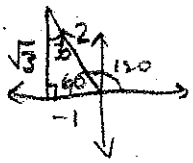
3) Find the following, if they exist.

a) $\sin 765°$

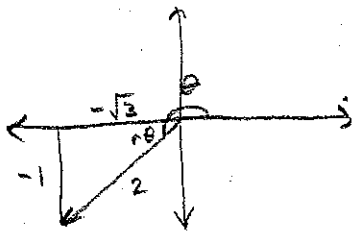
$\sin 45° = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$

b) $\tan -600°$

$\tan 120° = -\sqrt{3}$



4) Given that $\sin\theta = -\frac{1}{2}$, find the measures of θ between 0° and 360°.

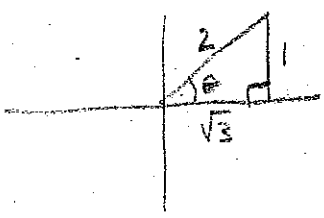


$r\theta = 30°$

$\theta = 210°, 330°$

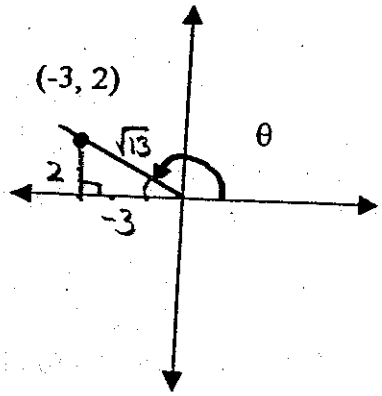
5) Given that $\tan\theta = \frac{\sqrt{3}}{3}$, find the measures of θ between 0° and 360°.

$\frac{\sqrt{3}}{3} = \frac{1}{\sqrt{3}}$ $\tan\theta = \frac{1}{\sqrt{3}}$



$\theta = 30°, 210°$

6) Find the 6 trig. functions for the following angle. Then find the measure of θ.



$\sin\theta = \frac{2}{\sqrt{13}} = \frac{2\sqrt{13}}{13}$ $\quad \csc\theta = \frac{\sqrt{13}}{2}$

$\cos\theta = \frac{-3}{\sqrt{13}} = \frac{-3\sqrt{13}}{13}$ $\quad \sec\theta = -\frac{\sqrt{13}}{3}$

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

$\theta = 146.3°$