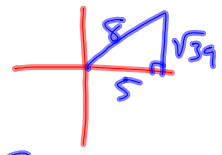
Day 2 on 4.4

I. Find the indicated trig value in the specified quadrant.

Ex 1) cos θ = 5/8, Quad I, trig value to find: csc θ



$\cos\theta = \frac{5}{8} = \frac{x}{r}$

$x = 5$

$r = 8$

$5^2 + a^2 = 8^2$

$25 + a^2 = 64$

$\sqrt{a^2} = \sqrt{39}$

$a = \sqrt{39}$

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

$\sin\theta = \frac{\sqrt{39}}{8}$

$\csc\theta = \frac{8}{\sqrt{39}} \cdot \frac{\sqrt{39}}{\sqrt{39}} = \frac{8\sqrt{39}}{39}$

II. Use a calculator to evaluate. (4 decimal places)

Ex 2) tan 245° = 2.1445

Ex 3) sin .65 = 0.6052

Ex 4) csc $\left(\frac{-8\pi}{9}\right)$ = -2.9238

$\sin\left(\frac{-8\pi}{9}\right)^{-1}$

III. Find two solutions of the equation. Give your answer in degrees ($0^\circ \le \theta < 360^\circ$) AND radians ($0 \le \theta < 2\pi$). Do not use a calculator!

Ex 5)

a) $\sin\theta = \frac{\sqrt{2}}{2}$

$\theta = 45^\circ$ or $\frac{\pi}{4}$

$\theta = 135^\circ$ or $\frac{3\pi}{4}$

b) $\cos\theta = \frac{1}{2}$

$\theta = 60^\circ$ or $\frac{\pi}{3}$

$\theta = 300^\circ$ or $\frac{5\pi}{3}$