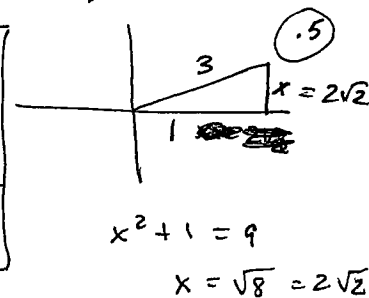


7) Use the definition or identities to find the exact value of each of the remaining five trig functions of the acute angle  $\theta$ .

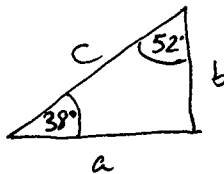
Draw a picture.

$\cos \theta = \frac{1}{3}$	$\sec \theta = 3$
$\sin \theta = \frac{2\sqrt{2}}{3}$ or $\frac{4}{3\sqrt{2}}$ or $\frac{\sqrt{8}}{3}$	$\csc \theta = \frac{3\sqrt{2}}{4}$
$\tan \theta = 2\sqrt{2}$ or $\sqrt{8}$	$\cot \theta = \frac{1}{\sqrt{8}}$ or $\frac{\sqrt{2}}{4}$



(.5)

8) Find the exact value of the expression  $\sin 38^\circ - \cos 52^\circ$ . You need to show work or explain how you got your answer for any credit. Draw an appropriate picture.



$$\sin 38^\circ - \cos 52^\circ$$

$$\frac{b}{c} - \frac{b}{c}$$

$$0$$

EXTRA CREDIT

1 POINT E.C.

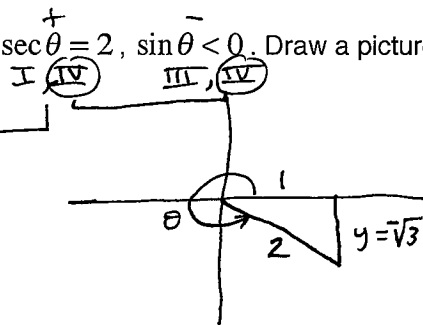
PICTURE MUST BE PRESENT OTHERWISE 0 E.C.

9) Find the exact value of each of the remaining trigonometric functions of  $\theta$  when  $\sec \theta = 2$ ,  $\sin \theta < 0$ . Draw a picture.

2 PT

$\sin \theta = -\frac{\sqrt{3}}{2}$	$\csc \theta = -\frac{2}{\sqrt{3}}$
$\cos \theta = \frac{1}{2}$	$\sec \theta = 2$
$\tan \theta = -\frac{\sqrt{3}}{1}$	$\cot \theta = \frac{1}{-\sqrt{3}}$

(.5 PT)



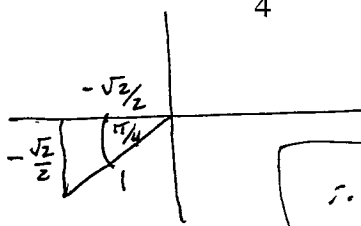
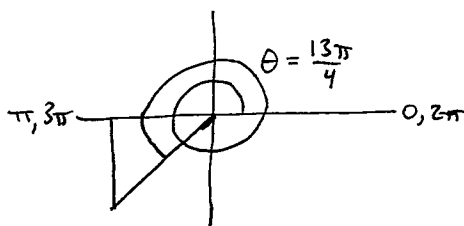
(.5 PT)

$$1 + y^2 = 2^2$$

$$y = \sqrt{3}$$

10) Use the reference angle to find the exact value of the expression  $\cos \frac{13\pi}{4}$ . Draw a picture.

.5 PT



$$\frac{13\pi}{4} = \left(3\frac{1}{4}\right)\pi$$

$$= 3\pi + \frac{\pi}{4}$$

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

(.5)