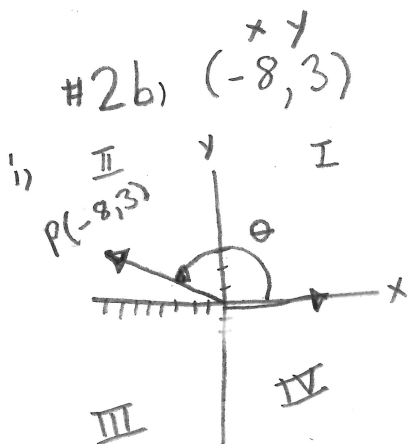


# Homework Support/Help

pg 299 # 2b, iii, iii, 3b, 6b, ii, 10a

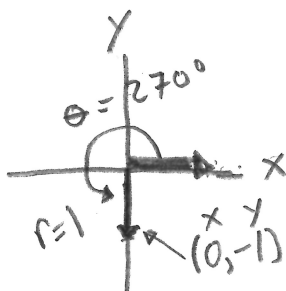


ii)  $r^2 = x^2 + y^2$   
 $r^2 = (-8)^2 + (3)^2$   
 $r^2 = 64 + 9$   
 $\sqrt{r^2} = \sqrt{73}$   
 $r = \sqrt{73}$   
 $r \approx 8.5$

iii)  $\sin \theta = \frac{y}{r}$        $\cos \theta = \frac{x}{r}$   
 $= \frac{3}{8.5}$                        $= \frac{-8}{8.5}$   
 $= \frac{3}{\sqrt{73} \cdot \sqrt{73}}$                $= -\frac{8}{\sqrt{73} \cdot \sqrt{73}}$   
 $= \frac{3\sqrt{73}}{73}$                        $= -\frac{8\sqrt{73}}{73}$

$\tan \theta = \frac{y}{x}$   
 $= \frac{3}{-8}$   
 $= -\frac{3}{8}$

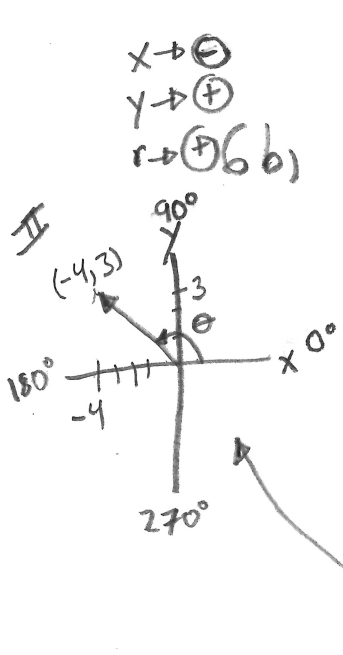
3b)  $270^\circ$



S Y R   C X R   T Y X

$\sin \theta = \frac{y}{r}$   
 $= \frac{-1}{1}$   
 $= -1$

$\cos \theta = \cos(270^\circ)$        $\tan \theta = \tan(270^\circ)$   
 $= \frac{x}{r}$                        $= \frac{y}{x}$   
 $= \frac{0}{1}$                        $= \frac{-1}{0}$   
 $= 0$                        $= \text{undefined}$



$$90^\circ \leq \theta \leq 180^\circ$$

$$\cot \theta = -\frac{4}{3}$$

$$= \frac{-8}{6} ?$$

i)  $\cot \theta = \frac{x}{y}$

$$= \frac{-4}{3}$$

$x = -4, y = 3$

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

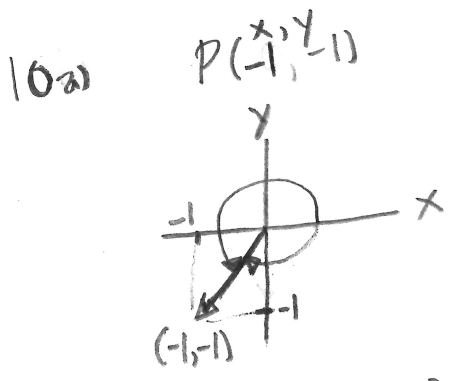
$$r^2 = (-4)^2 + (3)^2$$

$$r^2 = 16 + 9$$

$$\sqrt{r^2} = \sqrt{25}$$

$r = 5$

ii) see diagram



i)  $\theta = 180^\circ + 45^\circ$

$\theta = 225^\circ$  (counter clockwise)

OR  $\theta = -90^\circ - 45^\circ$

$\theta = -135^\circ$  (clockwise)

ii)

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

$$r^2 = (-1)^2 + (-1)^2$$

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

$$r = \sqrt{2}$$

$\sin \theta = \frac{y}{r}$	$\cos \theta = \frac{x}{r}$	$\tan \theta = \frac{y}{x}$
$= \frac{-1}{\sqrt{2}}$	$= \frac{-1}{\sqrt{2}}$	$= \frac{-1}{-1}$
$= -\frac{\sqrt{2}}{2}$	$= -\frac{\sqrt{2}}{2}$	$= 1$