ABC 7288
II

1.) $(-1,0)$ and $(-2,5)$

$$m = \frac{0-5}{-1-{-2}} = \frac{-5}{+1} = -5$$

$$y - y_1 = m(x - x_1)$$

$$y - 0 = -5(x - {-1}) \quad \text{or} \quad y - 5 = -5(x - {-2})$$

2.)

	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$
sin	0	$1/2$	$\sqrt{2}/2$	$\sqrt{3}/2$	1
cos	1	$\sqrt{3}/2$	$\sqrt{2}/2$	$1/2$	0
tan	0	$1/\sqrt{3}$	1	$\sqrt{3}$	und.

$$\arctan\left(-\frac{1}{\sqrt{3}}\right) = -\frac{\pi}{6}$$

$$-\frac{\pi}{2} < y < \frac{\pi}{2}$$

3.) $\frac{6y-2}{2} = y + 5$

$6y - 2 = 2y + 10$

$4y = 12 \quad y = 3$

4.) $8x - x^2$

$= -x^2 + 8x$

$= (-x^2 + 8x) \qquad \left(\frac{-8}{2}\right)^2 = 16$

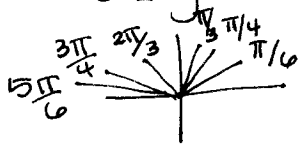
$= -1(x^2 - 8x)$

$= -1(x^2 - 8x + 16 - 16)$

$= -1(x^2 - 8x + 16) + 16 = -1(x-4)^2 + 16$

5.) $\arccos(-\frac{1}{2}) = y = \frac{2\pi}{3}$

$0 \le y \le \pi$



6.) $2\ln(2x) - \ln(4x) = \ln 3$

$\ln(2x)^2 - \ln(4x) = \ln 3$

$\ln 4x^2 - \ln 4x = \ln 3$

$\ln\left(\frac{4x^2}{4x}\right) = \ln 3$

$\ln x = \ln 3$

$x = 3$

8.) $3^x = 16$

$\ln(3^x) = \ln 16$

$x \ln 3 = \ln 16$

$x = \frac{\ln 16}{\ln 3}$

$3^x = 16$

$\log_3 3^x = \log_3 16$

$x = \log_3 16$