

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

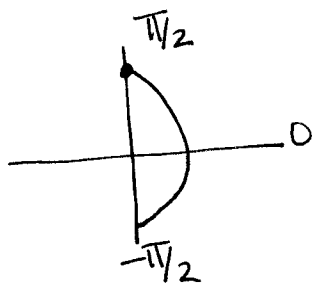
$$m = \frac{0-5}{-1-2} = \frac{-5}{+1} = -5$$

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

$$y - 0 = -5(x - (-1))$$

$$y - 5 = -5(x - (-2))$$

2.)



$$\arcsin x = y$$

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

$$\arcsin(1) = \frac{\pi}{2}$$

3.)

$$\frac{2y}{y+2} = \frac{1+2y}{y}$$

$\Rightarrow$

$$2y \cdot y = (y+2)(1+2y)$$

$$2y^2 = y + 2 + 2y^2 + 4y$$

$$-2y^2$$

$$-2y^2$$

$$0 = 5y + 2$$

$$\Rightarrow -2 = 5y$$

$$-2/5 = y$$

4.)

$$(x^2 + 6x) + 4$$

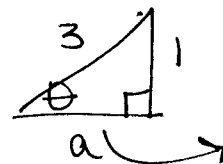
$$\left(\frac{6}{2}\right)^2 = 9$$

$$(x^2 + 6x + 9 - 9) + 4$$

$$(x^2 + 6x + 9) - 9 + 4$$

$$(x+3)^2 - 5$$

5.)



$$a^2 + 1^2 = 3^2$$

$$a^2 = 8$$

$$a = \sqrt{8} = 2\sqrt{2}$$

$$\tan \theta = \frac{1}{\sqrt{8}} = \frac{\sqrt{8}}{8} = \frac{2\sqrt{2}}{8} = \frac{\sqrt{2}}{4}$$

6.)

$$e^{3t} - 4^9 = 0$$

$$e^{3t} = 4^9$$

$$\ln e^{3t} = \ln 4^9$$

$$\frac{3t = 9 \ln 4}{3}$$

$$t = 3 \ln 4 = \ln 4^3 = \ln 64$$

$$8.) \left(\frac{z^{-3}}{z^{-1}} \right)^{1/2} = \left(z^{-3-(-1)} \right)^{1/2}$$

$$= (z^{-2})^{1/2}$$

$$= z^{-1} = \frac{1}{z}$$