9.1 Homework #1, 3, 9, 11, 13, 15

#1 $x = t^2 + t \quad y = t^2 - t \quad -2 \le t \le 2$

#3 $x = \cos^2 t, \quad y = 1 - \sin t \quad 0 \le t \le \frac{\pi}{2}$

$x = \sin^2 \frac{1}{2}\theta \quad y = \cos^2 \frac{1}{2}\theta \quad -\pi \le \theta \le \pi$

#9 $\sin^2 \frac{1}{2}\theta + \cos^2 \frac{1}{2}\theta = x^2 + y^2$

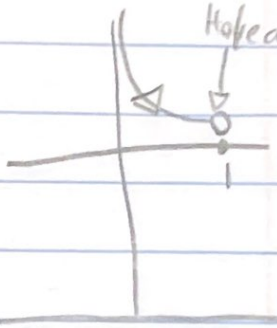
$x^2 + y^2 = 1$

#11 $x = \sin t$

$y = \csc t$

$0 < t < \frac{\pi}{2}$

$y = \frac{1}{x} \quad (0,1)$

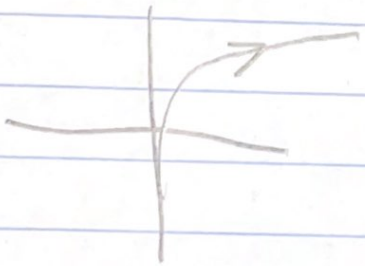


#13 $x = e^{2t} \quad y = t + 1$

$y = \frac{1}{2}\ln(x) + 1$

where $x > 0$

t



9.1 Homework #15

#15 $x = 3 + 2\cos t \quad y = 1 + 2\sin t \quad \frac{\pi}{2} \le t \le \frac{3\pi}{2}$

$(x-3)^2 + (y-1)^2 = 4 \quad (\cos^2 t + \sin^2 t = 1)$

circle

radius 2 center at (3,1)

counterclockwise