

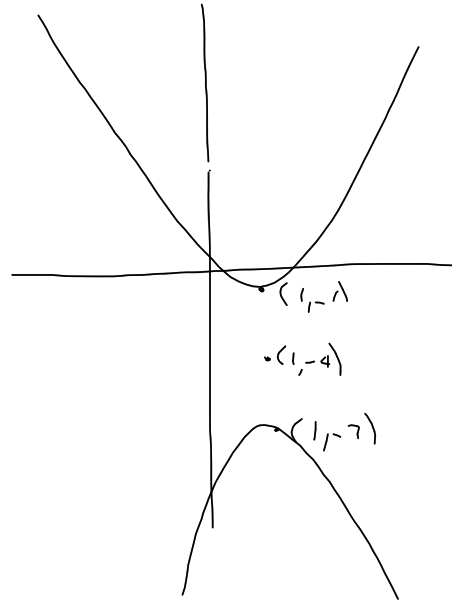
$$5b) \quad x = 1 + 2 \tan \theta \Rightarrow \tan \theta = \frac{x-1}{2}$$

$$y = 3 \sec \theta - 4 \Rightarrow \sec \theta = \frac{y+4}{3}$$

$$\tan^2 \theta + 1 = \sec^2 \theta$$

$$\frac{(x-1)^2}{4} + 1 = \frac{(y+4)^2}{9}$$

$$\frac{(y+4)^2}{9} - \frac{(x-1)^2}{4} = 1$$



$$5c) \quad x = t + \frac{1}{t} \quad y = t^2 + \frac{1}{t^2}$$

$$t^2 + \frac{1}{t^2} = \left(t + \frac{1}{t}\right)^2 - 2$$

$$\underline{y = x^2 - 2}$$

$$\text{Sd)} \quad x = \cos \theta + \sin \theta$$

$$y = \cos \theta - \sin \theta$$

$$\underline{\cos^2 \theta + \sin^2 \theta = 1}$$

$$x^2 = \cos^2 \theta + 2 \sin \theta \cos \theta + \sin^2 \theta$$

$$y^2 = \cos^2 \theta - 2 \sin \theta \cos \theta + \sin^2 \theta$$

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

$$\underline{\underline{\quad}}$$

7a)

$$x = a + r \cos \theta \Rightarrow \cos \theta = \frac{x-a}{r}$$

$$y = b + r \sin \theta \Rightarrow \sin \theta = \frac{y-b}{r}$$

$$\cos^2 \theta + \sin^2 \theta = 1$$

$$\frac{(x-a)^2}{r^2} + \frac{(y-b)^2}{r^2} = 1$$

$$\underline{(x-a)^2 + (y-b)^2 = r^2}$$