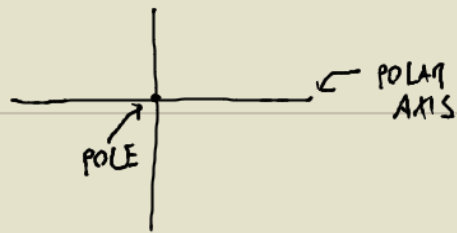


$$1. \quad r = \frac{5}{1 - \sin \theta}$$

$$r = \frac{e(p)}{1 - \frac{1}{e} \sin \theta}$$



PARABOLA; DIRECTRIX: $y = -5$

$$2. \quad r = \frac{3}{1 - 2 \cos \theta}$$

$$= \frac{e(p)}{1 - \frac{2}{e} \cos \theta}$$

$$e = 2 \quad p = \frac{3}{2}$$

HYPERBOLA: $x = -\frac{3}{2}$

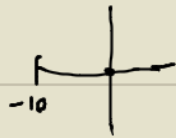
$$3. \quad r = \frac{5}{1 - \frac{1}{2} \cos \theta}$$

$$= \frac{e(p)}{1 - \frac{1}{2} \cos \theta}$$

$$\frac{1}{2} p = 5$$

$$p = 10$$

$$\text{so } e = \frac{1}{2} \quad p = 10$$



ELLIPSE; $x = -10$