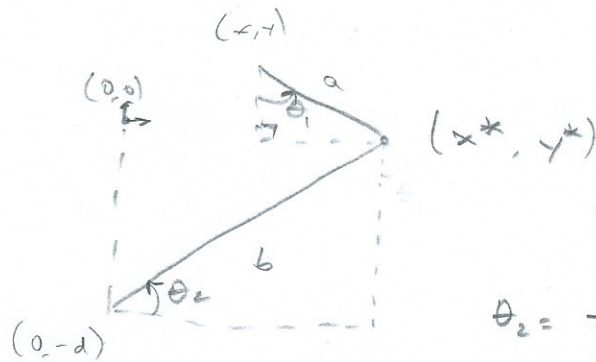
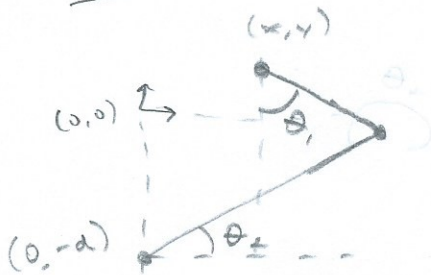


Init



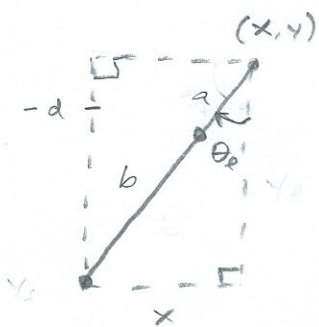
$$\theta_2 = \tan^{-1} \left(\frac{y^* + d}{x^*} \right)$$

$$x^* = x + a \sin \theta_1 = b \cos \theta_2$$

$$y^* = y - a \cos \theta_1 = b \sin \theta_2 - d$$

Solve for θ_1
and θ_2

Final



$$\theta_f = \sin^{-1} \left(\frac{x}{a+b} \right)$$

$$d\theta = \theta_1 + \theta_2$$

$$\text{vert travel} = y_f - y - d$$

$$y_f = \sqrt{(a+b)^2 - x^2} + y$$

