(x_0, y_0) 已知

$$\begin{cases} f_{1,0} = -\dfrac{2f_c}{c} v_0 \cos\left(\theta_0 - \dfrac{\phi_{1,0} + \varphi_0}{2}\right) \cos\left(\dfrac{\phi_{1,0} - \varphi_0}{2}\right) \\ f_{2,0} = -\dfrac{2f_c}{c} v_0 \cos\left(\theta_0 - \dfrac{\phi_{2,0} + \varphi_0}{2}\right) \cos\left(\dfrac{\phi_{2,0} - \varphi_0}{2}\right) \end{cases}$$

联立解得 v_0、θ_0

$$\begin{cases} x_1 = x_0 + v_0 N_0 T_s \cos\theta_0 \\ y_1 = y_0 + v_0 N_0 T_s \sin\theta_0 \end{cases}$$

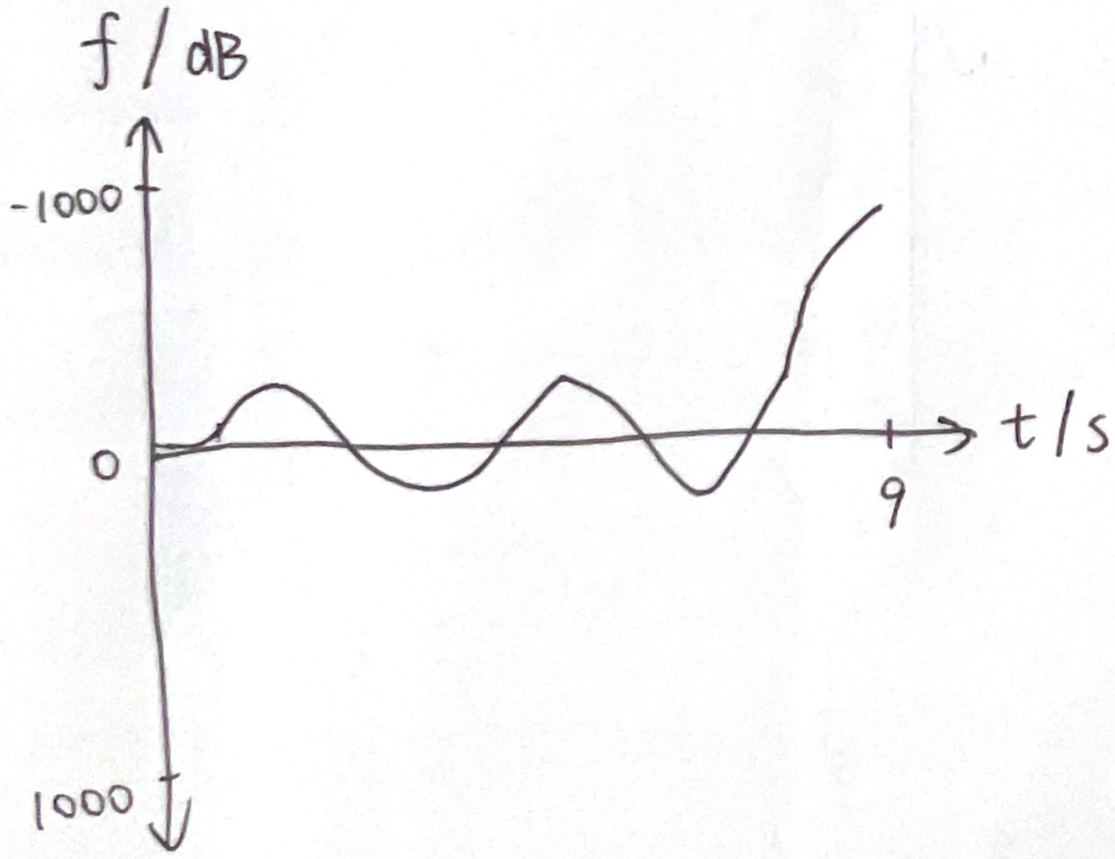
求得 (x_1, y_1)

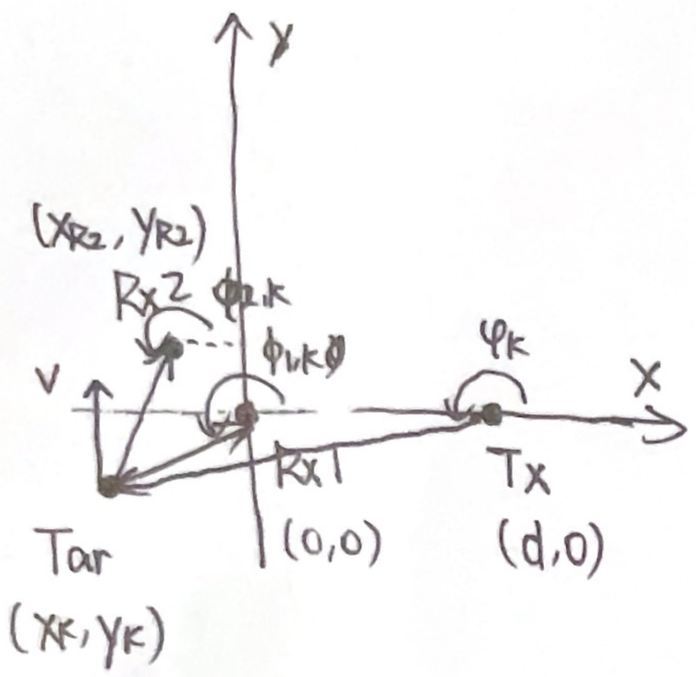
~~$f_{1,0} = -\dfrac{2f_c}{c} v_1 \cos$~~

$$\begin{cases} f_{1,1} = -\dfrac{2f_c}{c} v_1 \cos(\theta_0 - \cdots) \cos(\cdots) \\ \cdots \end{cases}$$

解得 v_1、θ_1

~~700~~





$$\begin{cases} \phi_{1,k} = \arctan\left(\frac{y_k}{x_k}\right) \\ \phi_{2,k} = \arctan\left(\frac{y_k - y_{R2}}{x_k - x_{R2}}\right) \\ \varphi_k = \arctan\left(\frac{y_k}{x_k - d}\right) \end{cases}$$

$$\begin{cases} f_{1,k} = -\frac{2f_c}{c} v_k \cos\left(\theta_k - \frac{\phi_{1,k} + \varphi_k}{2}\right) \cos\left(\frac{\phi_{1,k} + \varphi_k}{2}\right) \\ f_{2,k} = -\frac{2f_c}{c} v_k \cos\left(\theta_k - \frac{\phi_{2,k} + \varphi_k}{2}\right) \cos\left(\frac{\phi_{2,k} - \varphi_k}{2}\right) \end{cases}$$

$$\begin{cases} x_{k+1} = x_k + v_k N_0 T_s \cos\theta_k \\ y_{k+1} = y_k + v_k N_0 T_s \sin\theta_k \end{cases}$$