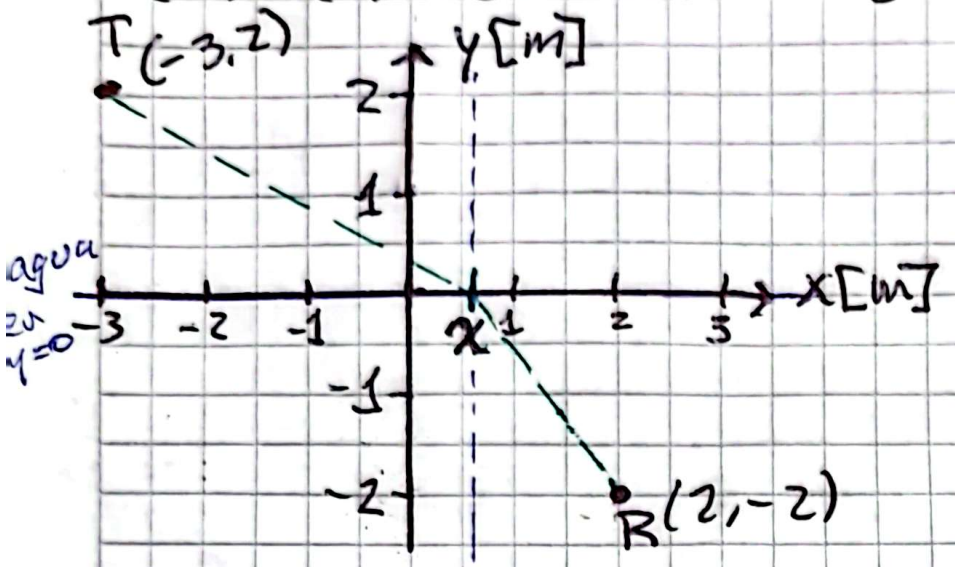
(a) (Teórico)



Tiempo de viaje

d_1: distancia en intervalo #1
d_2: distancia en intervalo 2

① $t = \frac{d_1}{v_1} + \frac{d_2}{v_2}$

v_1: velocidad en intervalo 1 (c)
v_2: velocidad en intervalo 2

$n_0 = \frac{c}{v_1}$ | $n_0 = 1 \rightarrow v_1 = \underline{c/n_0}$

$n_1 = \frac{c}{v_2} \rightarrow v_2 = \underline{\frac{c}{n_1}}$

- distancia intervalo 1:

$d_1^2 = d_{1x}^2 + d_{1y}^2 \rightarrow d_1^2 = (x - T[0])^2 + (T[1])^2$

↳ $d_1 = \sqrt{(x - T[0])^2 + (T[1])^2}$

- distancia intervalo 2:

$d_2^2 = d_{2x}^2 + d_{2y}^2 \rightarrow d_2^2 = (R[0] - x)^2 + R[1]^2 \rightarrow d_2 = \sqrt{(R[0] - x)^2 + R[1]^2}$

↳ $d_2 = \sqrt{(-1)^2 (x - R[0])^2 + R[1]^2} \rightarrow d_2 = \sqrt{(x - R[0])^2 + R[1]^2}$

↳ ① $t(x) = \frac{d_1}{v_1} + \frac{d_2}{v_2} \rightarrow t(x) = \frac{\sqrt{(x - T[0])^2 + (T[1])^2}}{c/n_0} + \frac{\sqrt{(x - R[0])^2 + (R[1])^2}}{c/n_1}$

↳ $c\,t(x) = n_0 \sqrt{(x - T[0])^2 + (T[1])^2} + n_1 \sqrt{(x - R[0])^2 + (R[1])^2}$