Punto teórico

Muestre que $ct(x) = n_0\sqrt{(x - T[0])^2 + T[1]^2} + n_1\sqrt{(x - R[0])^2 + R[1]}$

$T = (-3, 2)\,m$

$R(2, -2)\,m$

superficie agua $y=0$

$n_0 \sin(a_0) = n_1 \sin(a_1)$ $\qquad n = c/v$

$v = x/t$

$t = x/v \quad \therefore \quad v = c/n$

$t = \Delta t_1 + \Delta t_2$

$t = \frac{n_0 x_0}{c} + \frac{n_1 x_1}{c}$

$ct = n_0 x_0 + n_1 x_1$

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

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$X_0 = \sqrt{\text{Desplazamiento } x^2 + \text{desplazamiento } y^2}$

X_0:

Desplazamiento $x = P_f - P_i = x - T[0]$

Desplazamiento $y = P_f - P_i = -T[1]$

$D_{x_0}^2 = (x - T[0])^2$

$D_{y_0}^2 = T[1]^2$

$X_0 = \sqrt{(x - T[0])^2 + T[1]}$

X_1 analogamente sera

$X_1 = \sqrt{(x - R[0])^2 + R[1]^2}$

$D_{x_1} = -(x - R[0])$

$D_{x_1}^2 = (x - R[0])^2$

$D_y = R[1] - 0$

$D_y^2 = R[1]^2$