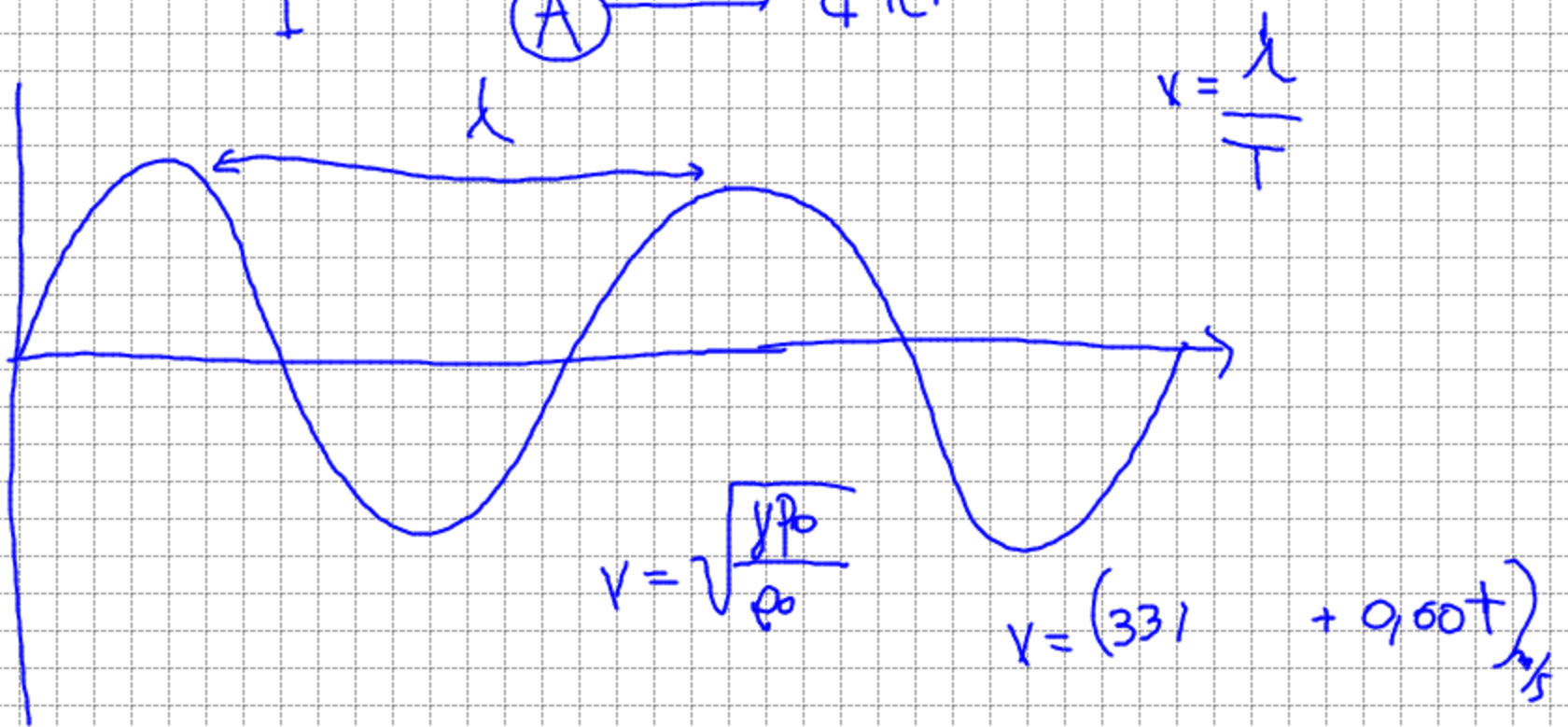


$$I = \frac{E}{S \Delta t} \quad \left( \frac{W}{m^2} \right)$$

$$I = \frac{P}{A} \rightarrow 4\pi r^2$$



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$$\Delta s = 3,8 \text{ m}$$

$$f = 5,0 \cdot 10^2 \text{ Hz}$$

$$\Delta t = ? \quad n = ?$$

$$\Delta t = \frac{\Delta s}{v}$$

$$\Delta t = \frac{3,8 \text{ m}}{343 \text{ m/s}} = 1,1 \cdot 10^{-2} \text{ s}$$

$$\lambda = \frac{v}{f} = \frac{343 \text{ m/s}}{5,0 \cdot 10^2 \text{ Hz}} = 68,6 \cdot 10^{-2} \text{ m}$$

$$n = \frac{\Delta s}{\frac{\lambda}{2}} = \frac{2\Delta s}{\lambda} = \frac{2(3,8 \text{ m})}{68,6 \cdot 10^{-2} \text{ m}} = 41$$

Tra la percezione del lampo e quella del tuono passano 5,0 s.

A quale distanza è caduto il fulmine?

$$v_l = 3 \cdot 10^8 \text{ m/s}$$

$$v_s = 341 \text{ m/s}$$

$$\Delta s = \Delta t \cdot v_s = (5,0 \text{ s})(341 \text{ m/s}) = 1,7 \text{ km}$$