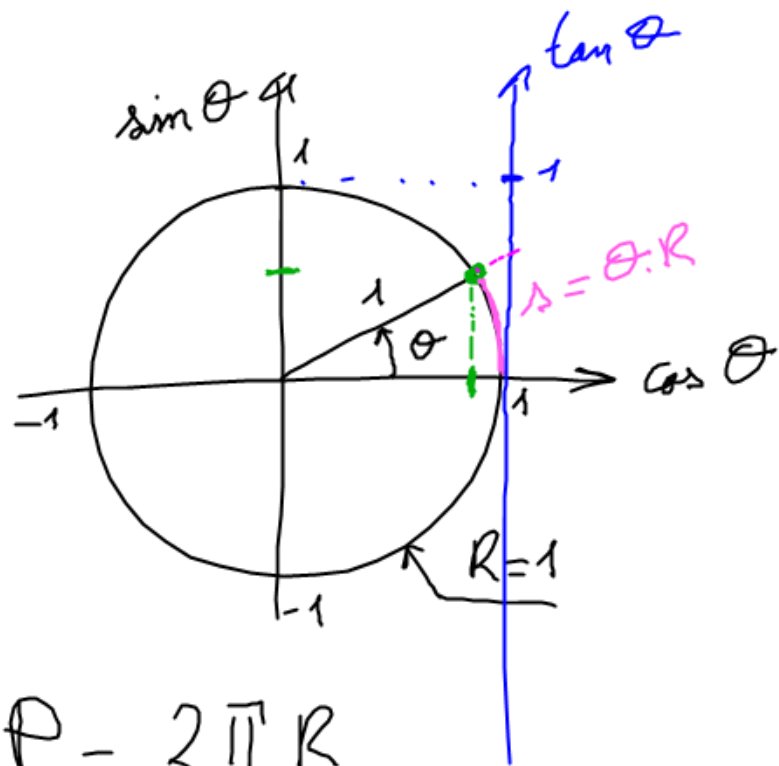
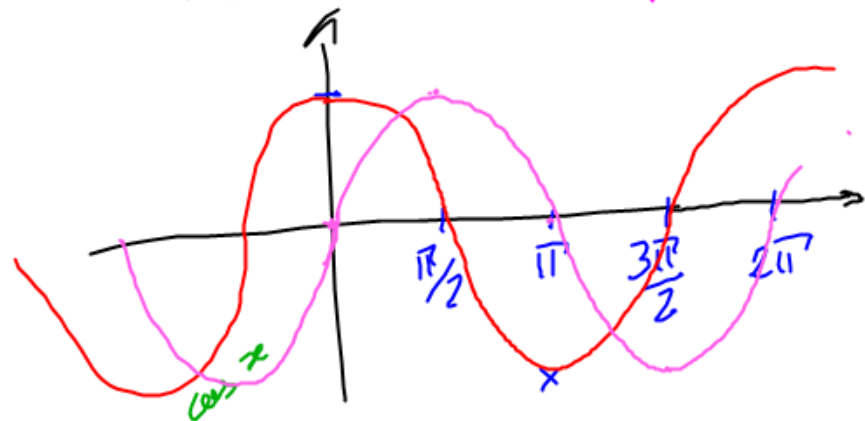
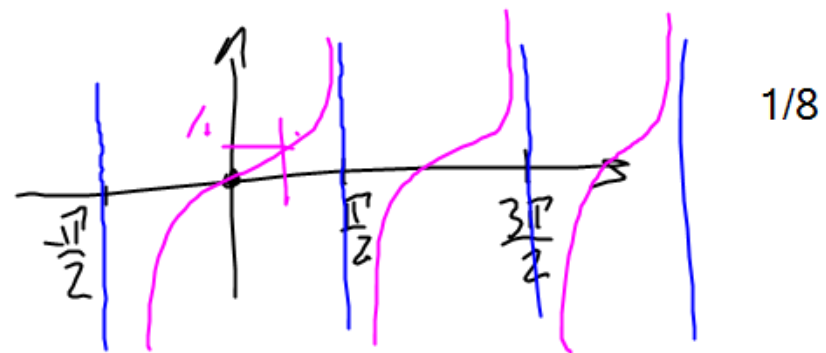




$$P = 2\pi R$$

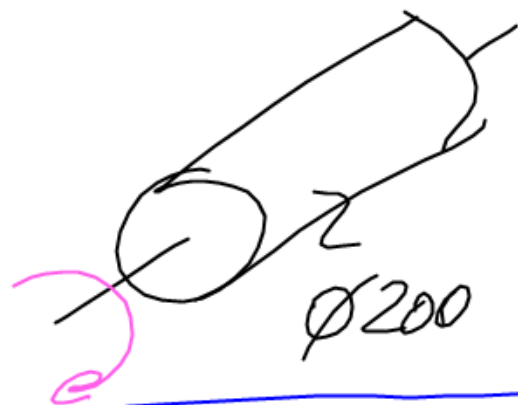
$$S = \pi R^2$$

$\frac{1}{2}$ m



$$V = \omega \cdot R$$

$\frac{1}{s}$ m/s



35 m de
cable.

$$s = \theta \cdot R$$

$$\theta = \frac{s}{R}$$

$$\frac{35}{\frac{D}{2}} = \frac{35 \cdot 2}{D}$$

$$\theta = \frac{35 \cdot 2}{D}$$

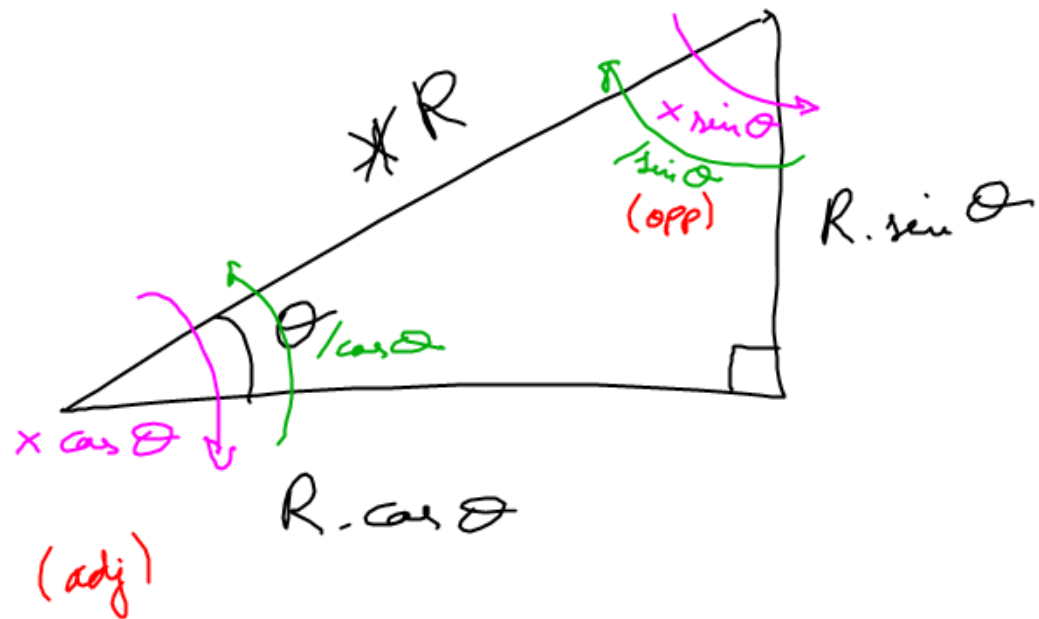
$$\theta = \frac{35 \cdot 2}{200 \cdot 10^{-3}} = 350 \text{ rad}$$

$$\approx 55,7 \text{ tr}$$

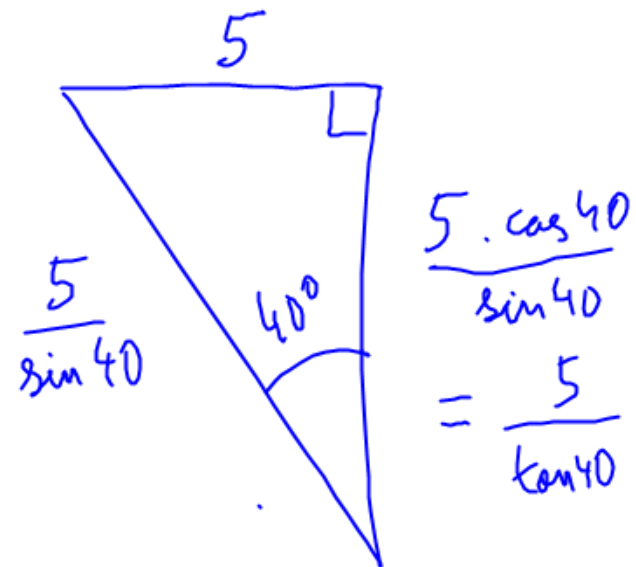
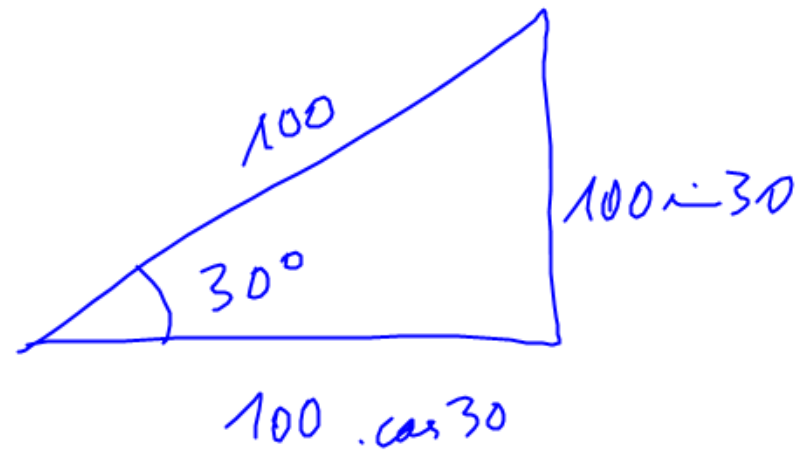
$$1 \text{ tr} = 360^\circ = 2\pi \text{ rad}$$

Diagram illustrating the conversion between degrees and radians for one full revolution (1 tr):

- Orange arrows show 360° and $1/360$.
- Blue arrows show $2\pi \cdot 360$ and $1/360 \cdot 2\pi$.
- Green arrows show 2π and $1/2\pi$.

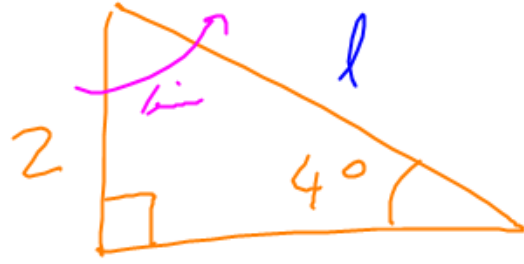


$$\tan \theta = \frac{\sin \theta}{\cos \theta}$$



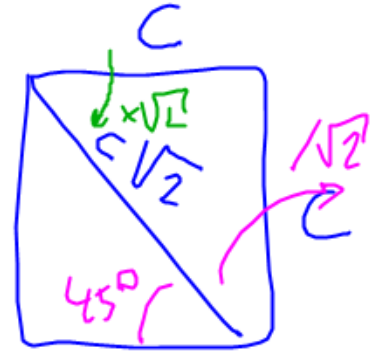
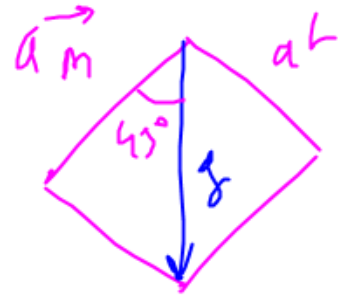
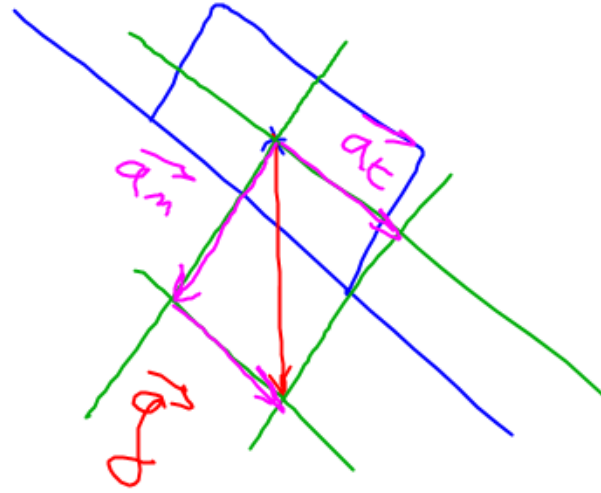
$$\frac{5 \cos 40}{\sin 40} = \frac{5}{\tan 40}$$

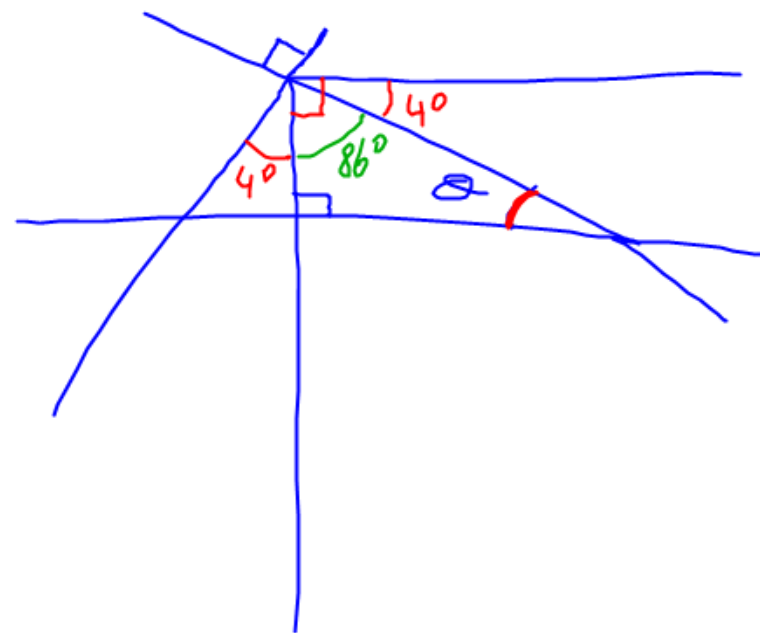
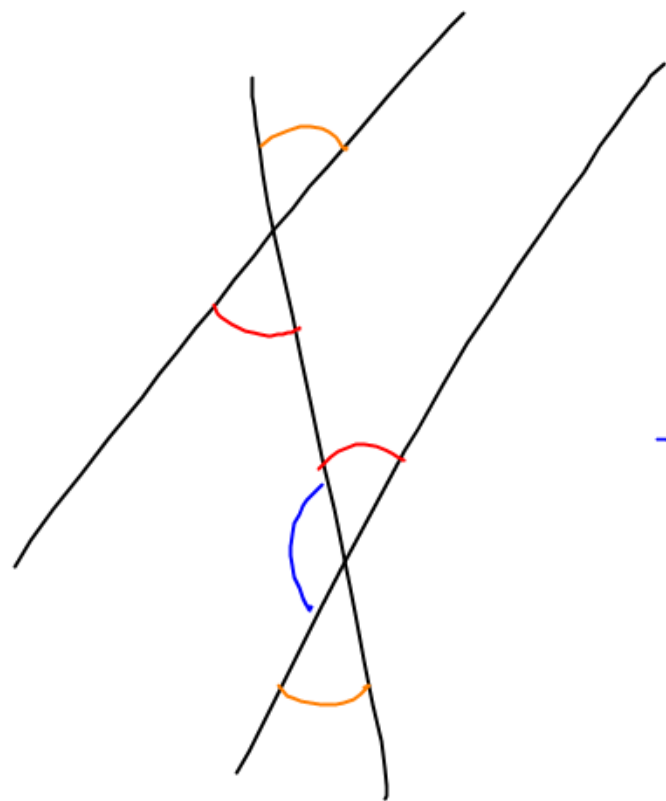
2)



$$l = \frac{2}{\sin 4} \approx 28,7 \text{ m}$$

4/8





3)



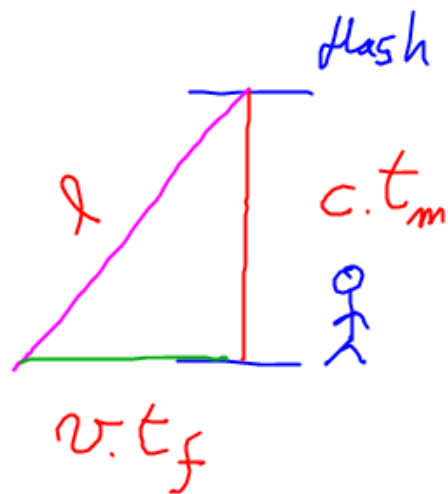
$$\|\vec{a}_n\| = a_n = 9.81 \cdot \cos 4$$

$$\approx 9.79 \text{ m/s}^2$$

$$\|\vec{a}_t\| = a_t = 9.81 \cdot \sin 4$$

$$\approx 0.684 \text{ m/s}^2$$

$$l_{\text{max}}^2 = c^2 \cdot t_f^2$$



$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}$$



stick figure $\otimes$ t_f



$$l^2 = v^2 \cdot t_f^2 + c^2 \cdot t_m^2$$

$$c^2 \cdot t_f^2 = v^2 \cdot t_f^2 + c^2 \cdot t_m^2$$

$$t_f = f(t_m, v, c)$$

$$c^2 t_f^2 - v^2 t_f^2 = c^2 t_m^2 \quad \left| \quad t_f = \sqrt{\frac{c^2}{c^2 - v^2}} \cdot t_m \right.$$

$$t_f^2 (c^2 - v^2) = c^2 \cdot t_m^2$$

$$t_f^2 = \frac{c^2 \cdot t_m^2}{c^2 - v^2}$$

$$t_f = \sqrt{\frac{c^2 t_m^2}{c^2 - v^2}}$$

$$t_f = \sqrt{\frac{c^2}{c^2 - v^2}} \cdot t_m$$

$$\sqrt{\frac{c^2}{c^2 - v^2}} =$$

$$\sqrt{\frac{1}{\frac{c^2 - v^2}{c^2}}} =$$

$$\sqrt{\frac{1}{\frac{c^2}{c^2} - \frac{v^2}{c^2}}}$$

$$= \sqrt{\frac{1}{1 - \frac{v^2}{c^2}}}$$

$$= \frac{1}{\sqrt{1 - \frac{v^2}{c^2}}}$$

$$t_f = \frac{1}{\sqrt{1 - \frac{v^2}{c^2}}} \cdot t_m$$