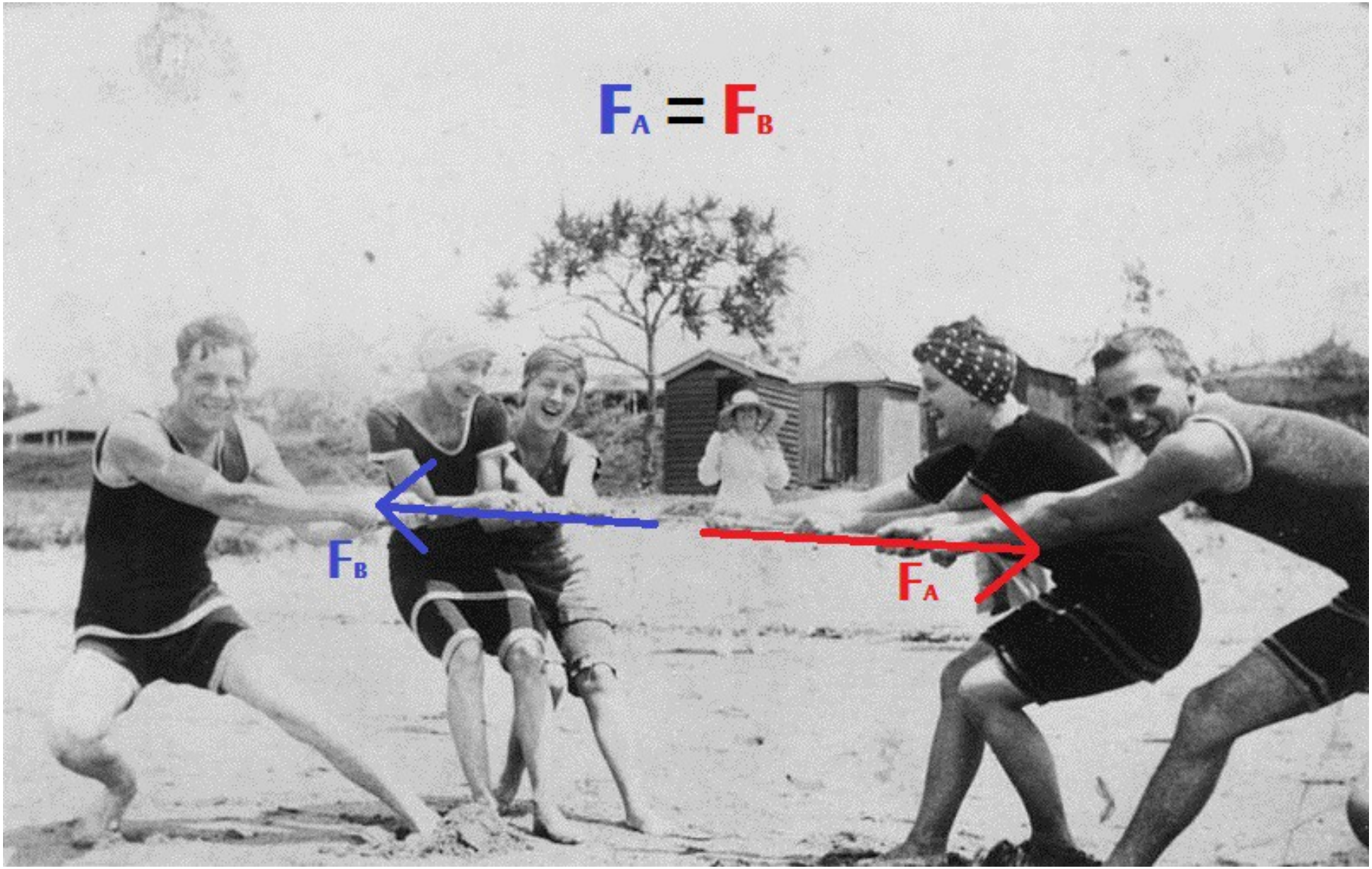
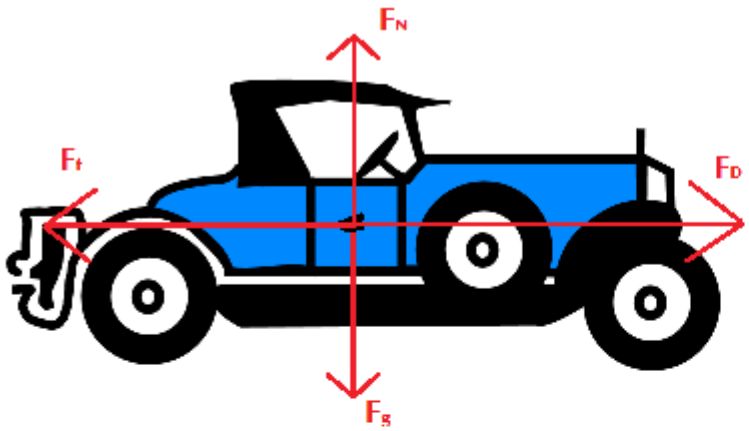
Balanced Forces


$F_A = F_B$
F_B
F_A

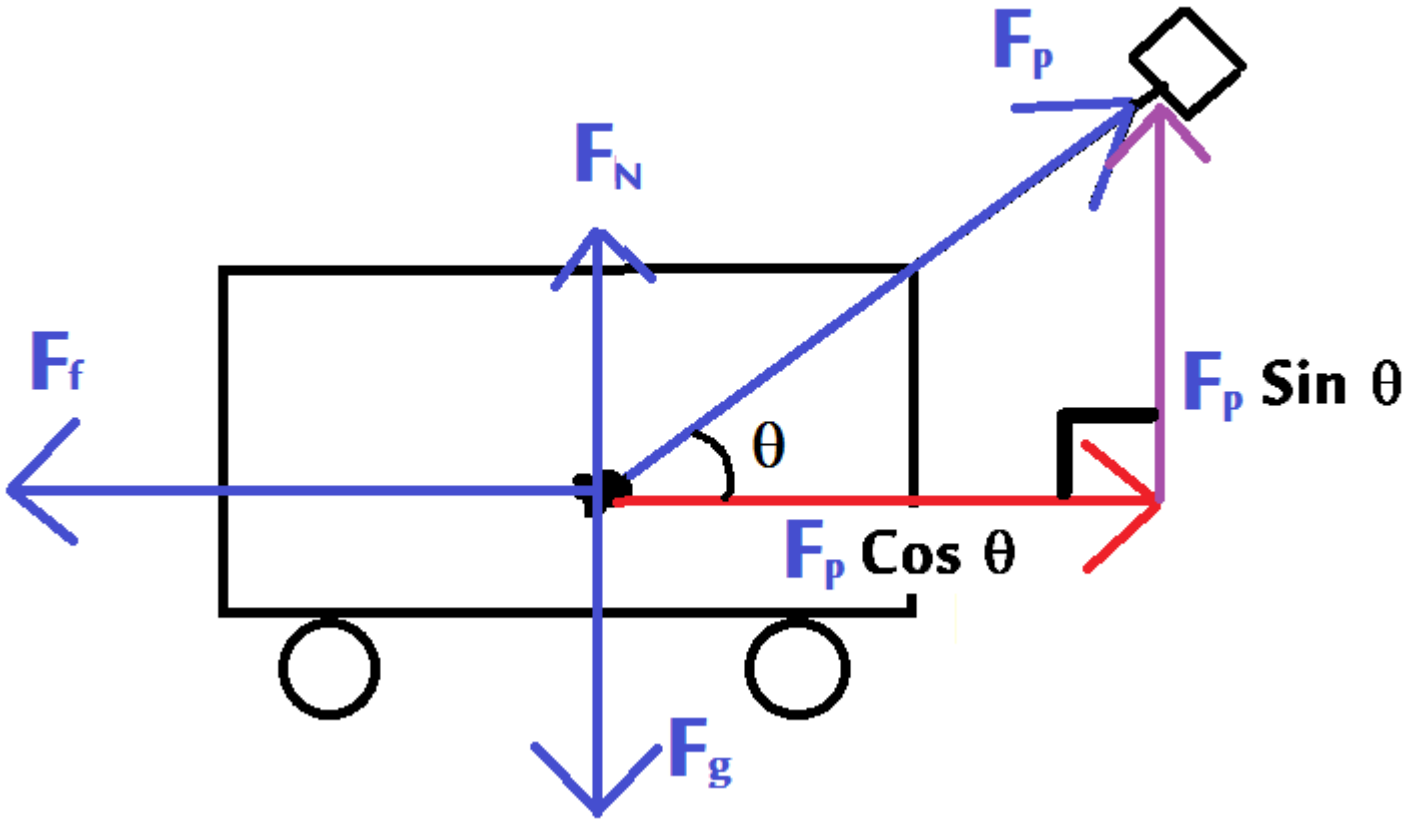


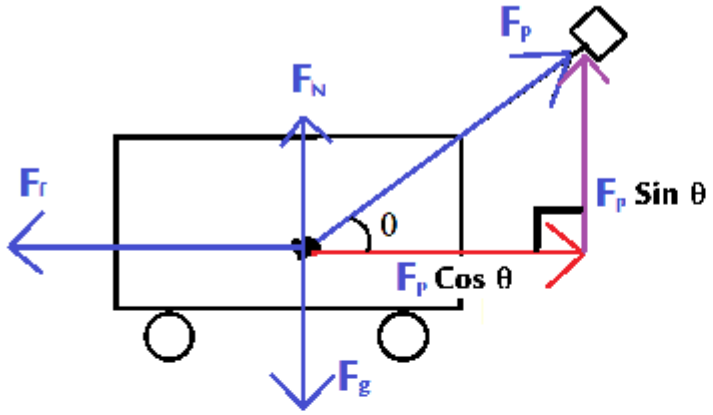
$$F_{left} = F_{right}$$

$$\boxed{F_d = F_f}$$

$$F_{up} = F_{down}$$

$$\boxed{F_N = mg}$$


F_p
F_N
F_f
F_p Sin θ
θ
F_p Cos θ
F_g

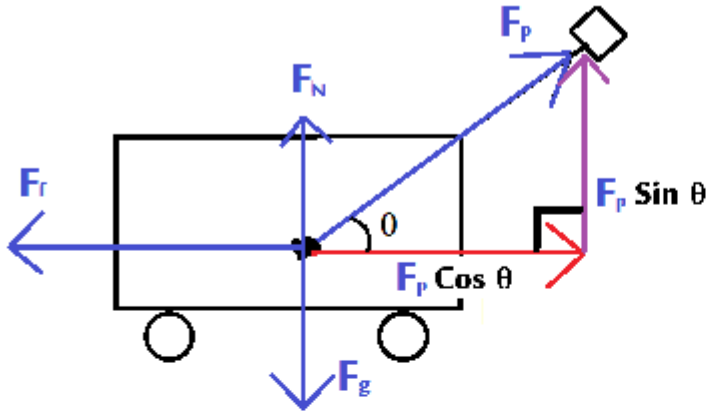


X-Direction:

$$F_f = F_p \cos\theta$$

Y-Direction:

$$F_g = F_N + F_p \sin\theta$$

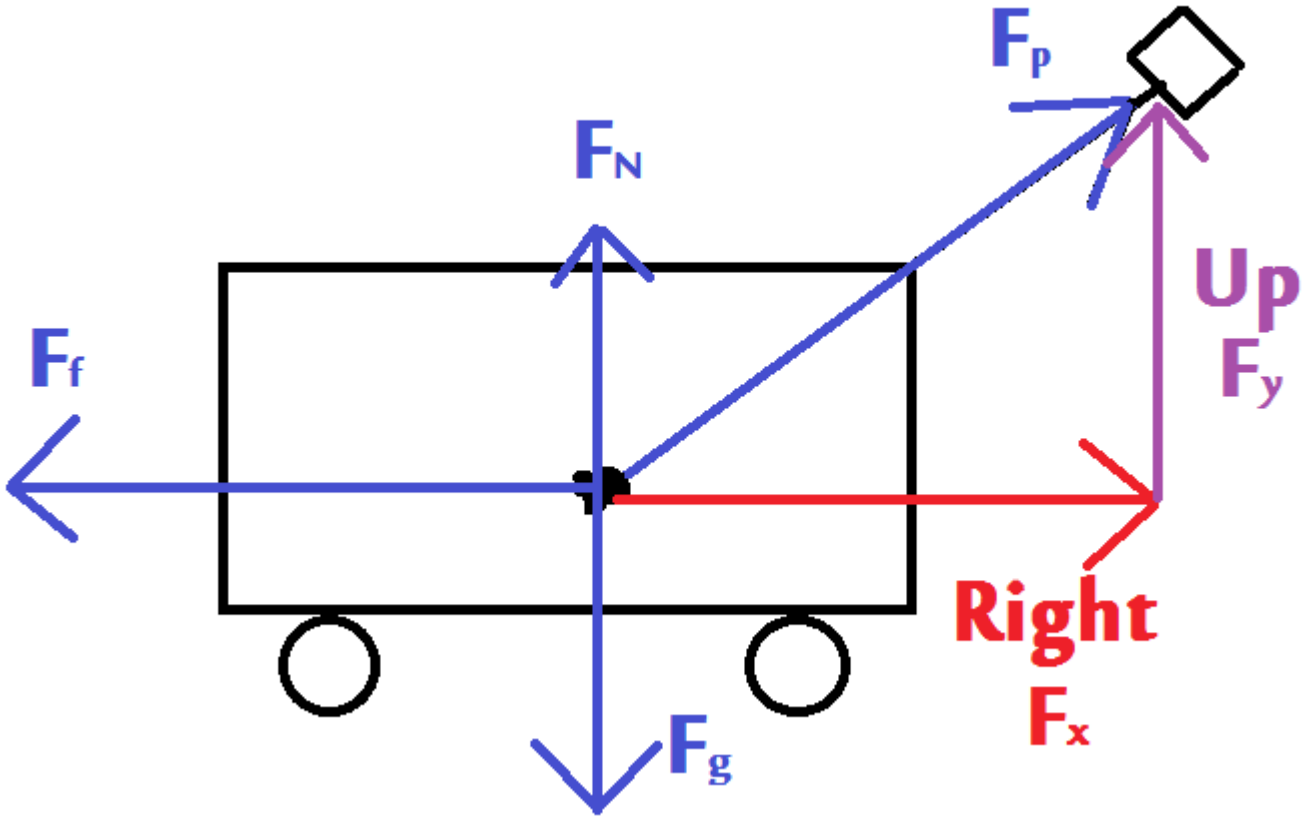


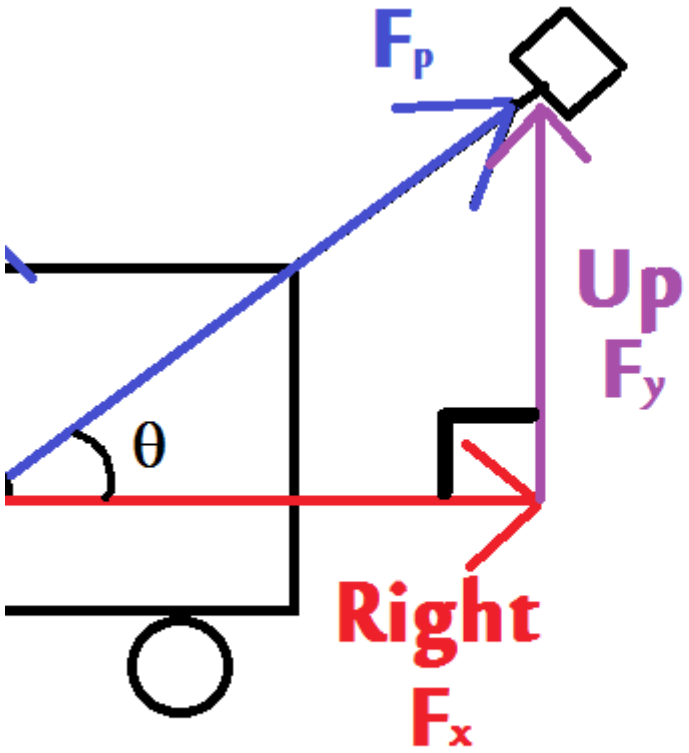
X-Direction:

$$F_f = F_p \cos\theta$$

Y-Direction:

$$mg = F_N + F_p \sin\theta$$


F_p
F_N
Up
F_y
F_f
Right
F_x
F_g

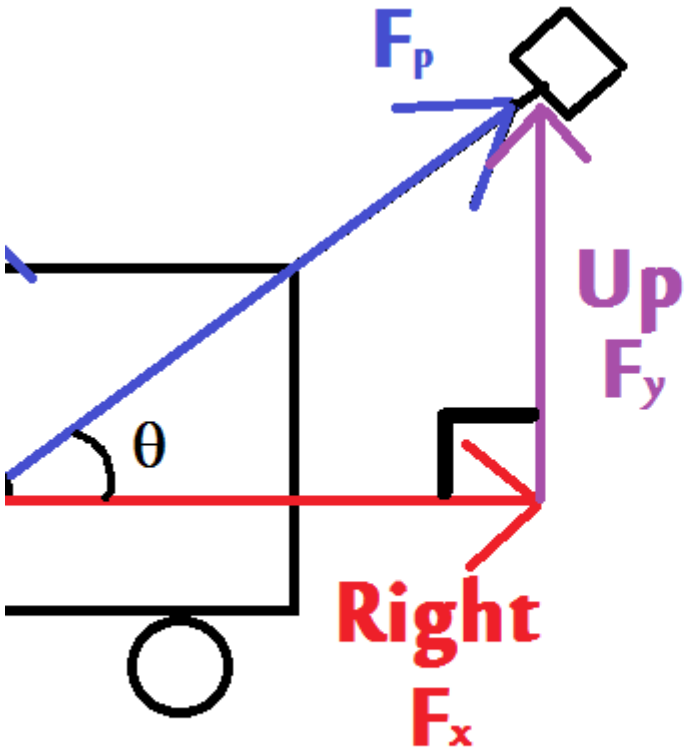


SOHCAHTOA

$$\cos\theta = \frac{\text{Adj}}{\text{Hyp}}$$

$$\cos\theta = \frac{F_x}{F_p}$$

$$F_x = F_p \cos\theta$$

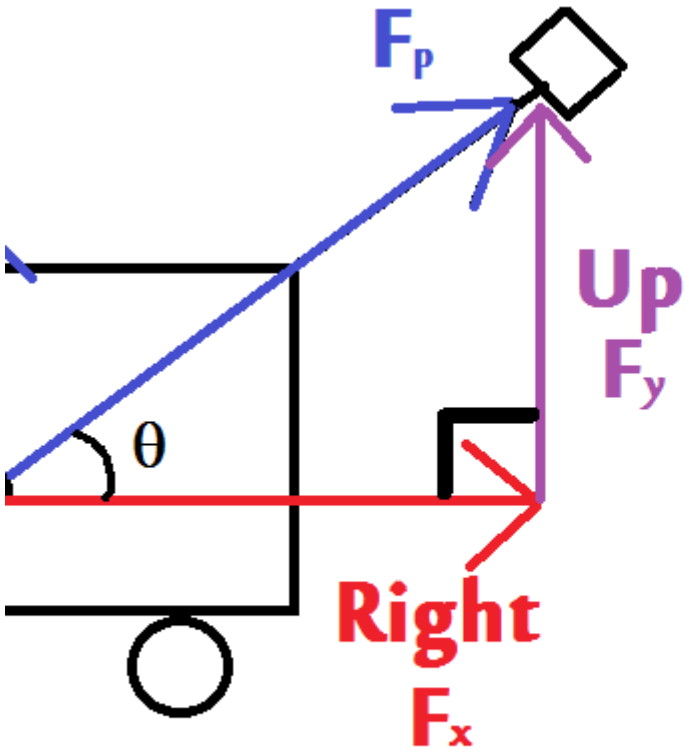


SOHCAHTOA

$$\cos\theta = \frac{\text{Adj}}{\text{Hyp}}$$

$$\cos\theta = \frac{F_x}{F_p}$$

$$\boxed{F_x = F_p \cos\theta}$$

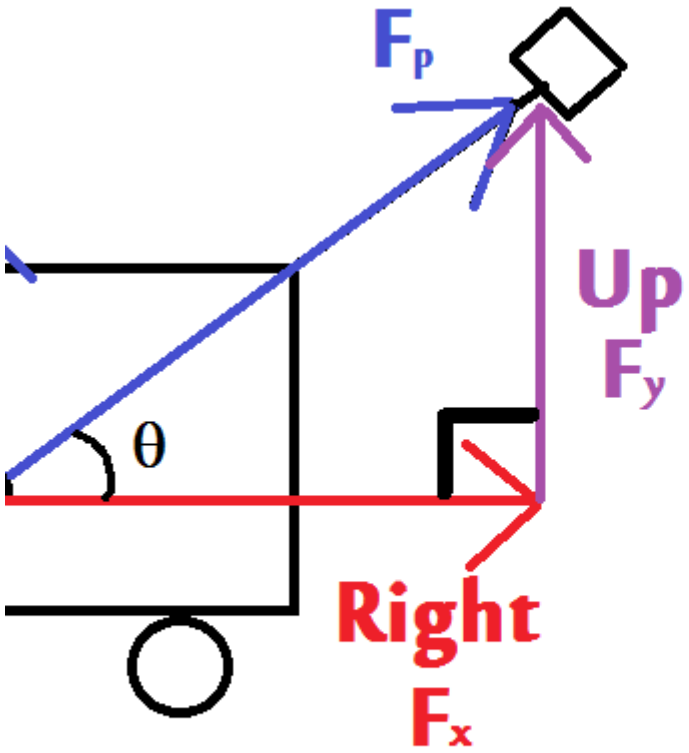


SOHCAHTOA

$$\text{Sin } \theta = \frac{\text{Opp}}{\text{Hyp}}$$

$$\text{Sin } \theta = \frac{F_y}{F_p}$$

$$F_y = F_p \text{ Sin } \theta$$

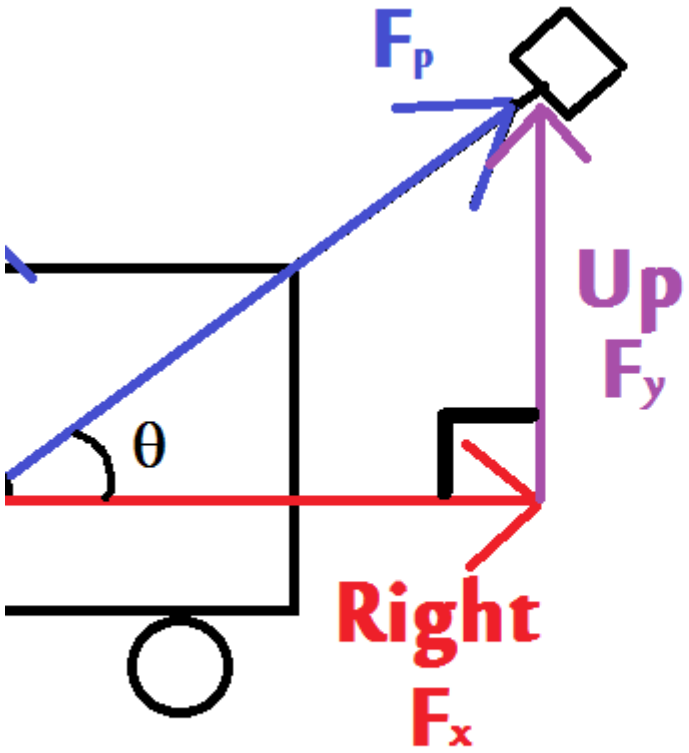


SOHCAHTOA

$$\sin\theta = \frac{\text{Opp}}{\text{Hyp}}$$

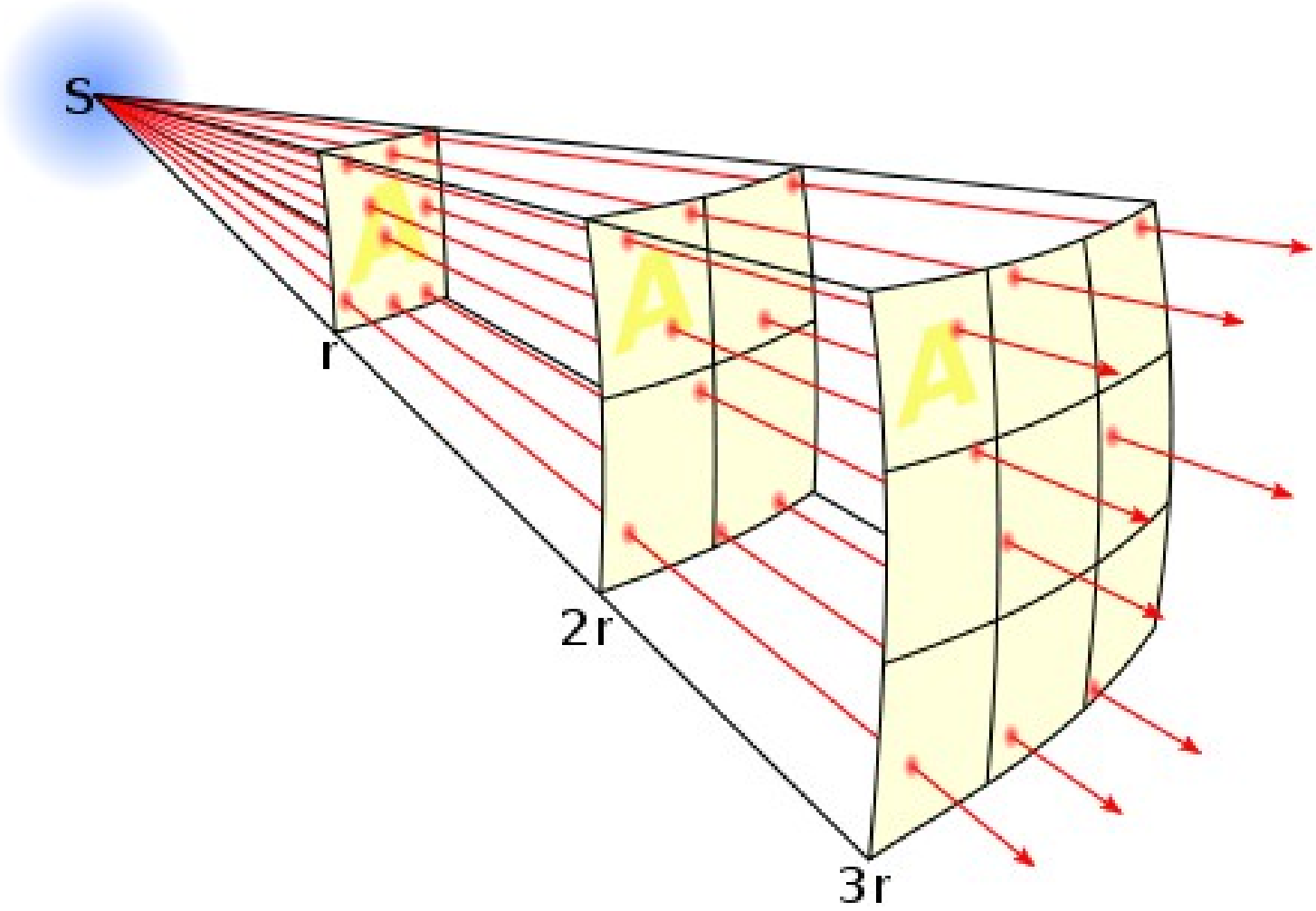
$$\sin\theta = \frac{F_y}{F_p}$$

$$F_y = F_p \sin\theta$$



$$F_y = F_p \text{ Sin } \theta$$

$$F_x = F_p \text{ Cos } \theta$$


S
A
A
A
r
2r
3r