

Luz Luz  
- Unidad 8

## Force

$$F = a \cdot m$$

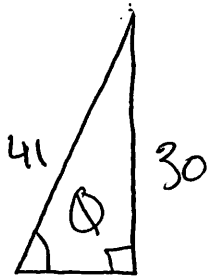
Force = mass · acceleration

units:  $\frac{\text{kgm}}{\text{s}^2} = \text{kg} \cdot \text{m/s}^2$

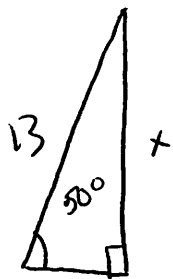
$$N = \text{kg} \cdot \text{m/s}^2$$

Force is a vector

Soh	CaH	toa
iPy	oPy	aPd
nPp	sJP	nPj

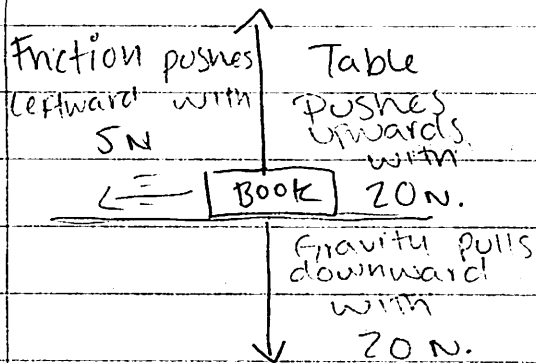


$$\begin{aligned}\sin \theta &= 30/41 \\ \theta &= \sin^{-1} 30/41 \\ \theta &= 47^\circ\end{aligned}$$



$$\begin{aligned}13 \cdot \sin 50^\circ &= \frac{x}{13} \cdot 13 \\ 13 \sin 50^\circ &= x \\ 10 &= x\end{aligned}$$

Force is any interaction that tends to change the motion of an object.  
A ball can cause an object with mass to change its velocity.



The book slides across the rough surface of the table from left to right. The downward force of gravity and the upward force of the table supporting the book act in opposite directions and thus balance each other. However, the force of friction acts leftwards, and there is no rightward force to balance it. An unbalanced force acts upon the book to change its state of motion.