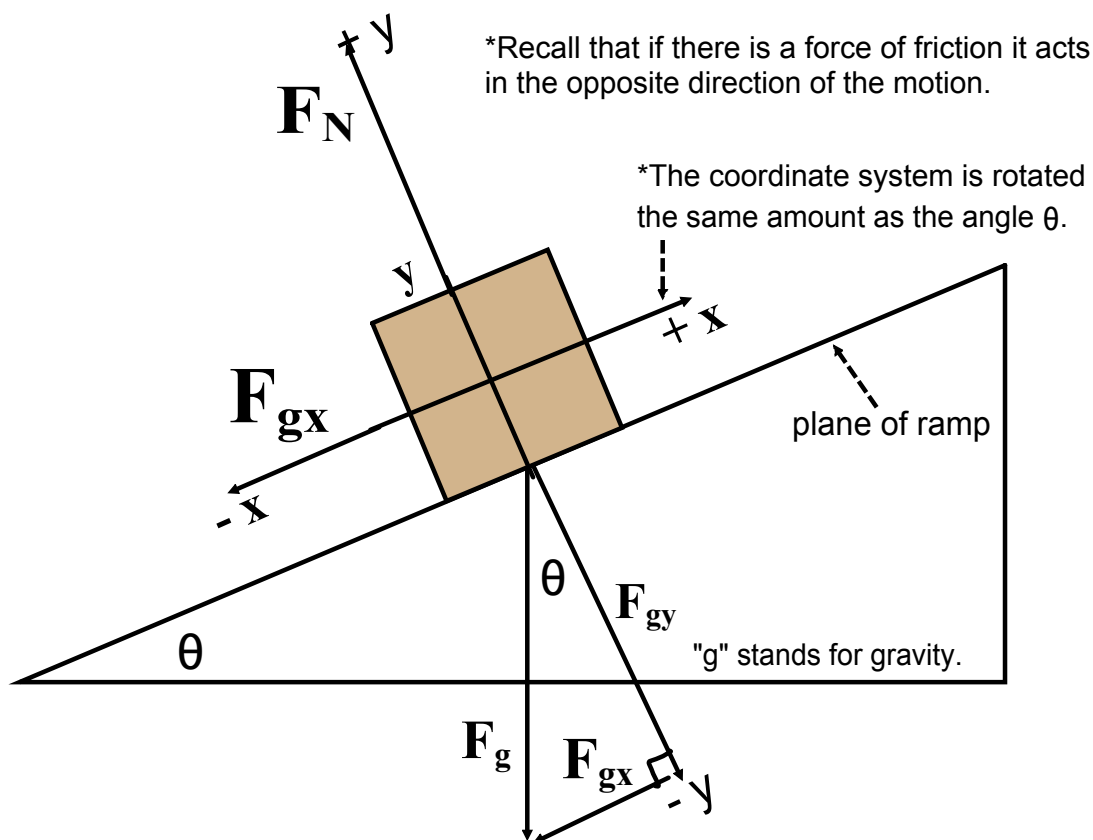
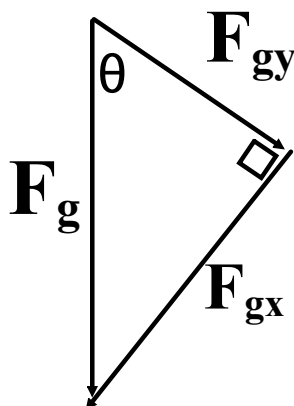


### Type III - Inclined Planes, Hills, Ramps



$F_{gy}$  and  $F_g$  are separated by  $\theta$  because of the crazy magic that is geometry.



$$F_{gx} = F_g \sin \theta \quad \longleftarrow \text{component parallel to the plane.}$$

$$F_{gy} = F_g \cos \theta \quad \longleftarrow \text{component perpendicular to the plane.}$$

**NOTE!** The *sin* and *cos* have switched places in the way we label the problem because of the geometry of our vectors and coordinate system.

**NOTE FURTHER!** Every  $F$  in the above diagram can be replaced with an  $a$  for acceleration.

## Attachments

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ramp-forces-and-motion\_en.jar