

G481

Module 2: Forces in Action

1.2.3 Equilibrium



Objectives

- **Draw** a free-body diagram for objects in equilibrium
- **Use** a triangle of forces to represent the equilibrium of three forces acting at a point
- **Explain** that both the net force and net moment on an object in equilibrium is zero



Equilibrium

- Sum of forces equals zero

$$\text{Forces}_{\text{up}} = \text{Forces}_{\text{down}}$$

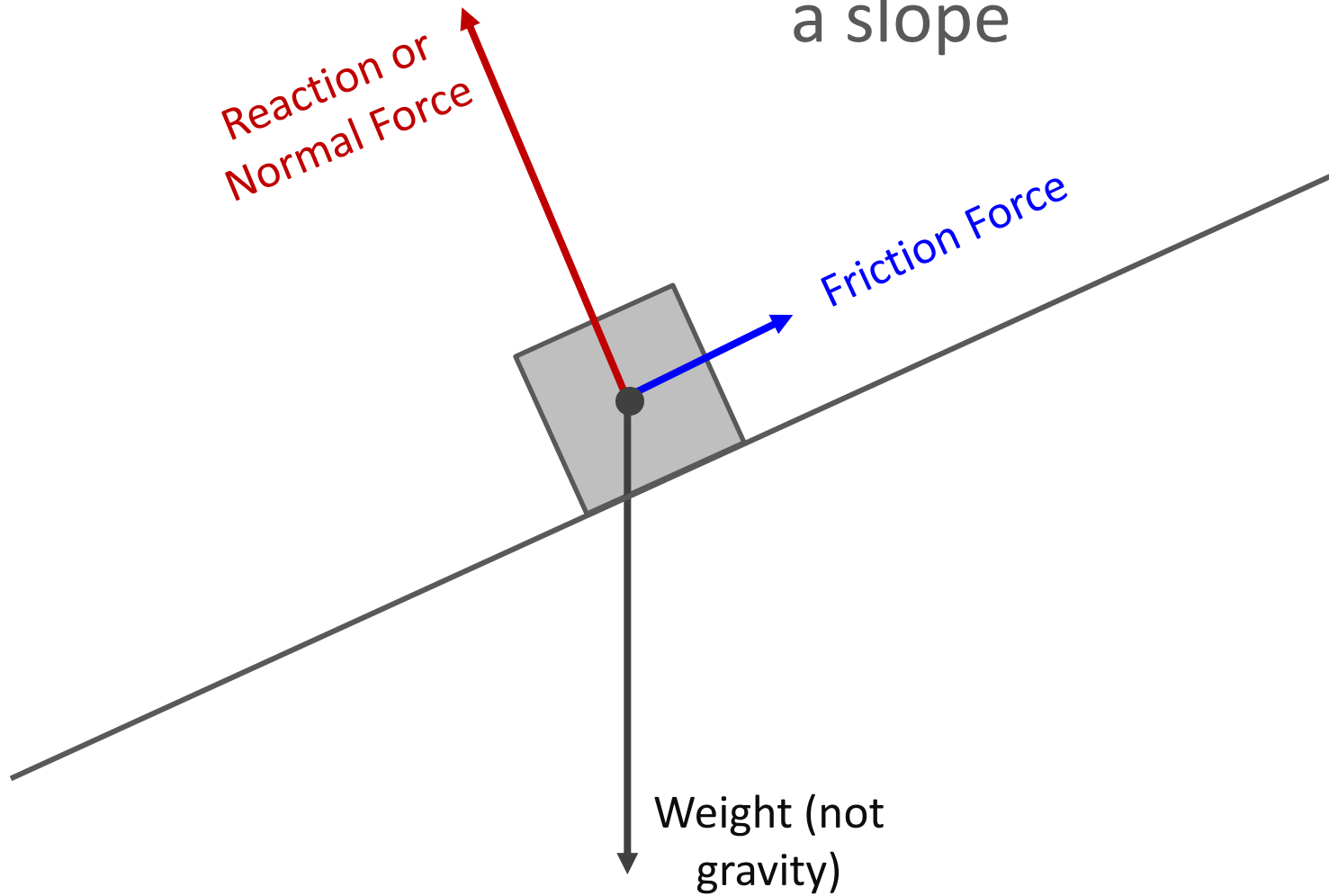
$$\text{Forces}_{\text{left}} = \text{Forces}_{\text{right}}$$

- Sum of moments equals zero

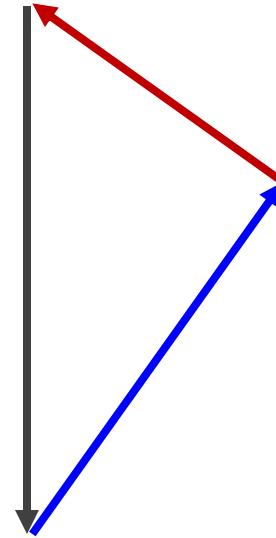
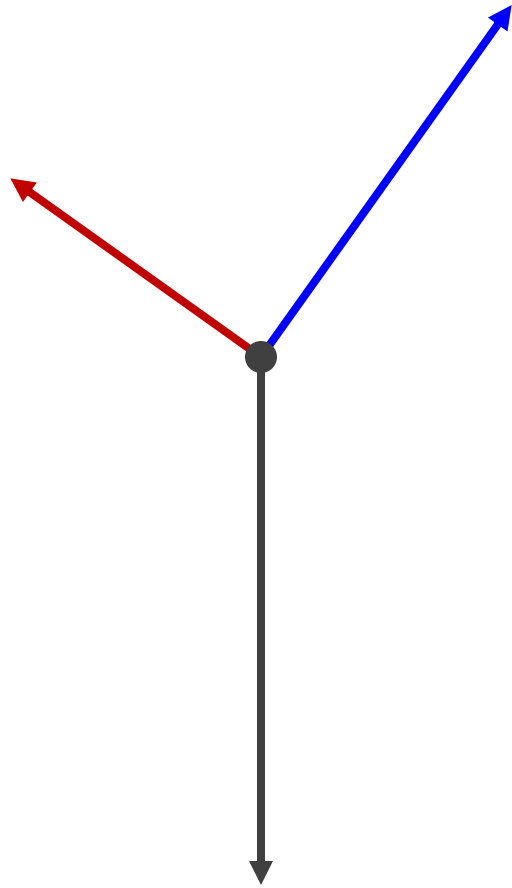


Equilibrium

A block on
a slope



Equilibrium



Equilibrium

