

Newton's second law:

$$\vec{F}_R = m\vec{a}, \quad (1)$$

$$\vec{F}_R = \sum_i \vec{F}_i, \quad (2)$$

where \vec{F}_R - resultant force and \vec{F}_i are forces acting on the body.

Newton's third law:

$$\vec{F}_{AB} = -\vec{F}_{BA}. \quad (3)$$

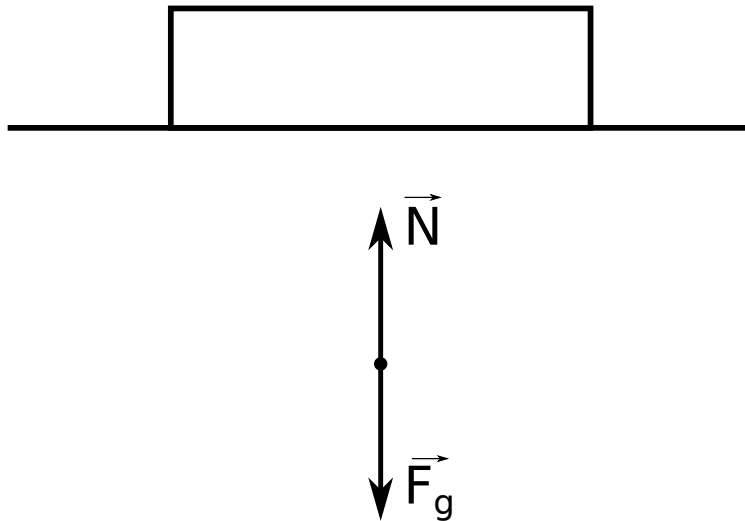


FIG. 1: Free body diagram