

Motion – Newton's Laws

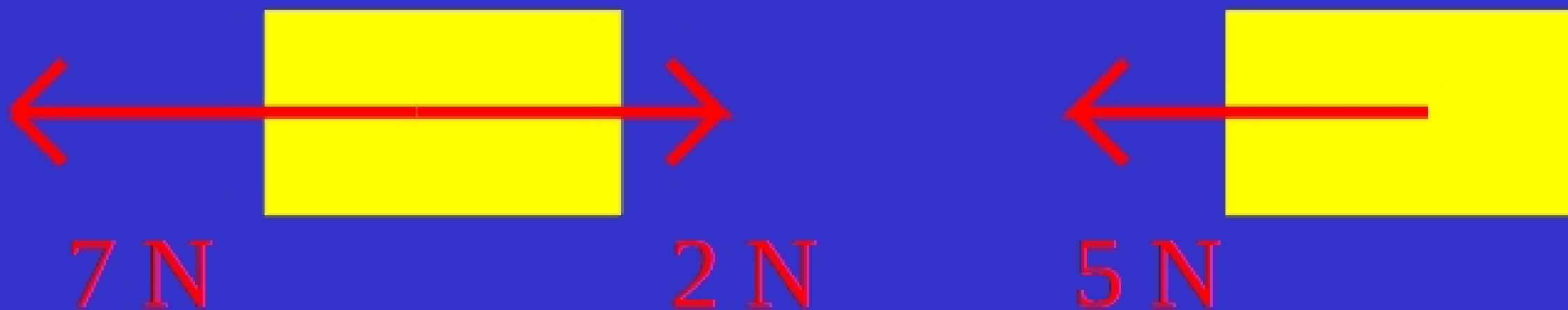
- 1. Every body continues in its state of rest or uniform motion unless it is acted upon by a net external force.*
- 2. The acceleration of a body is equal to the net force acting on the body divided by the mass of the body.*

$$\vec{a} = \vec{F}_{NET} / m$$
$$\vec{F}_{NET} = m\vec{a}$$

Newton's Laws

$$\vec{F}_{\text{net}} = m \vec{a}$$

Net force is the *vector sum* of the individual forces



Newton's Laws

$$\vec{F}_{\text{net}} = m \vec{a}$$

The direction of the acceleration is the same as that of the net force.

If the mass is 10 Kg,
the acceleration is
0.5 m/sec² to the left.

