## Applied

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February 27, 2024

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6 Newton's Laws

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### Chapter 6

## Newton's Laws

#### Definition 1 (Newton's Laws). • Newton's first law:

If a body is at rest or moving at a constant speed in a straight line, then it will remain at rest or keep moving in a straight line at constant speed unless acted upon by a force.

#### • Newton's second law:

The rate of change of the momentum of a body is equal to the force imposed on it

$$\mbox{momentum } \vec{p} = m \cdot \vec{v} / / \frac{\mbox{d}}{\mbox{d}t} \vec{p} = \vec{F}. \label{eq:momentum}$$