

Momentum

● def.

momentum (kgms^{-1}) = mass \times velocity
 Ns

$$p = mv$$

↳ vector: 方向由速度方向决定

● N2

$$F = \frac{\Delta p}{\Delta t}$$

Conservation of linear momentum

● Principle

When the net force on a system is 0, the total momentum is constant.

condition: no external force acts on the object 合外力为0

$$m_1 v_1 + m_2 v_2 = m_1 v_1' + m_2 v_2'$$