

Rearranging the Subject of the Formula

$$\epsilon_k = \frac{1}{2} m v^2$$

$$\frac{2}{1} \times \frac{1}{2} m v^2 = \epsilon_k \times \frac{2}{1}$$

$$\frac{m v^2}{m} = \frac{(2) \times \epsilon_k}{1 m}$$

$$\sqrt{v^2} = \sqrt{2 \times \epsilon_k}$$

$$v = \sqrt{\frac{2 \cdot \epsilon_k}{m}}$$

$$V = I \times R$$
$$6 = 2 \times 3$$

$$V = I \cdot R$$

$$\frac{I \cdot R}{R} = \frac{V}{R}$$

$$I = \frac{V}{R}$$

$$2 = \frac{6}{3} \quad \frac{V}{R}$$

$$I = \frac{V}{R}$$

$$I = V \times R$$

$$I = \frac{R}{V}$$

$$V = I R$$

$$I \times R = V$$

$$R = \frac{V}{I}$$

$$V = u + at$$

$$at + u = V$$

$$at = V - u$$

$$a = \frac{V - u}{t}$$

$$\frac{v-u}{t} = a$$

$$\frac{v-u}{a} = t \cdot a$$

$$\frac{v-u}{a} = t$$

$$t = \frac{v-u}{a}$$

$$a = \frac{F}{m}$$

$$\frac{F}{m} = a$$

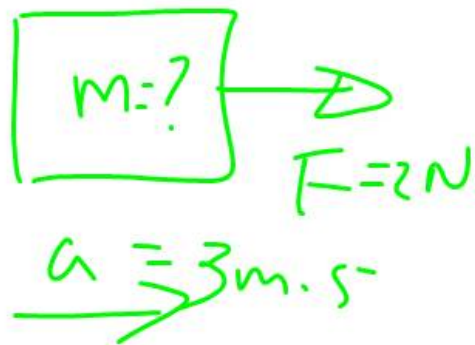
$$F = m \times a$$

$$m = ?$$

$$a = 3 \text{ m.s}^{-2}$$

$$F = 2 \text{ N}$$

$$\left. \begin{aligned} a &= \frac{F}{m} \\ m \times a &= F \\ m &= \frac{F}{a} \end{aligned} \right\} = \frac{2}{3}$$



$$= \frac{2}{3} = 0,67 \text{ Kg}$$

$$\frac{2}{3} = \frac{F}{m}$$

Diagram showing the derivation of the mass formula. It shows the equation $\frac{2}{3} = \frac{F}{m}$ with a diagonal line crossing through it. Below the line, the terms are rearranged to show $m = \frac{F}{a}$.

$$E_k = \frac{1}{2} m v^2$$

$$\cancel{\frac{2}{1}} \times \boxed{\cancel{\frac{1}{2}}} m v^2 = E_k$$

$$m v^2 = \underline{2} E_k$$

$$m = \frac{2 E_k}{v^2}$$

$$\frac{2 \times 1}{1 \times 2}$$

$$\frac{\cancel{2}}{\cancel{2}} = 1$$

$$\frac{1}{2} m v^2 = E_k$$

$$\frac{1}{2} m = \frac{E_k}{v^2}$$

$$m = \frac{2}{1} \times \frac{E_k}{v^2}$$