

Acceleration

$$a = \frac{\Delta v}{\Delta t} \quad \text{where: } \Delta v = v_f - v_i$$

$$a = \frac{v_f - v_i}{\Delta t}$$

To solve for v_f or v_i :

$$a \Delta t = v_f - v_i$$

v_f

v_i

$$v_i + a \Delta t = v_f$$

$$a \Delta t - v_f = -v_i$$

$$-a \Delta t + v_f = v_i$$

$$v_f - a \Delta t = v_i$$

Do NOT
MEMORIZE!!

KNOW HOW TO REARRANGE

Δt

$$a \Delta t = v_f - v_i$$

$$\Delta t = \frac{v_f - v_i}{a}$$

Converting $\frac{\text{km}}{\text{h}}$ to $\frac{\text{m}}{\text{s}}$!

$$? \frac{\text{m}}{\text{s}} = 95 \frac{\text{km}}{\text{h}} \left(\frac{1000 \text{ m}}{1 \text{ km}} \right) \left(\frac{1 \text{ h}}{3600 \text{ s}} \right)$$

$$? \frac{\text{m}}{\text{s}} = 26 \text{ m/s}$$