

Work

$$W = \pm F D$$

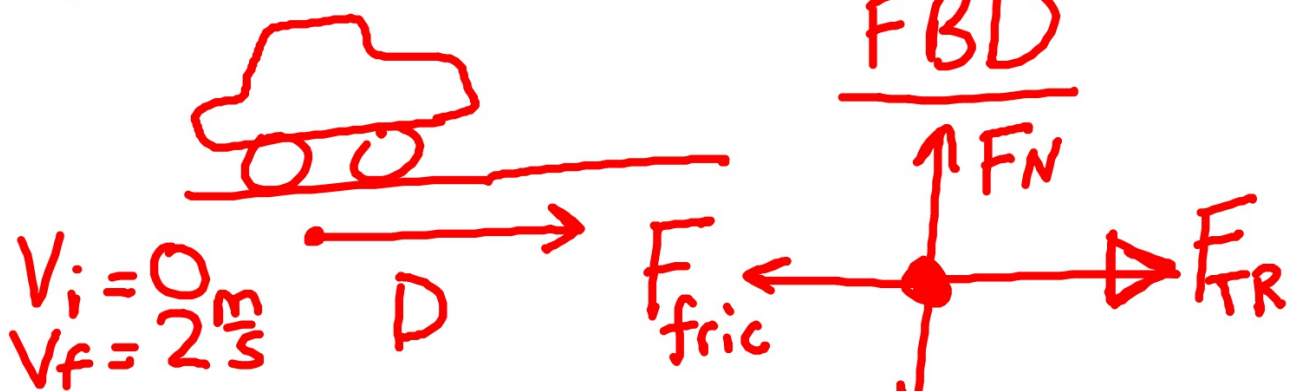
$$W = \Delta K$$

Kinetic Energy

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

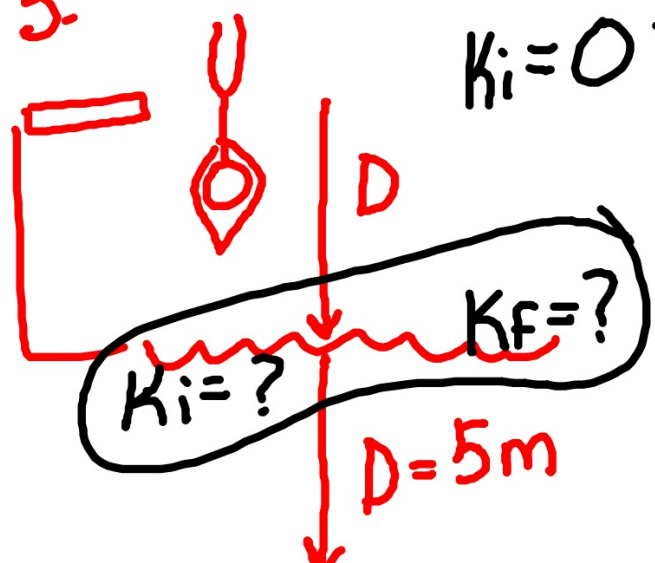
$$\Delta K = K_f - K_i$$

$$W = W_{\text{TRACTION}} + W_{\text{fric}} = K_f - K_i$$



F_g and F_N are perpendicular to D , so they do NOT do work.

3.



$$K_i = 0 \text{ J}$$

$m = 50 \text{ kg}$
 $F_w = 1500 \text{ N}$
 $D = 5 \text{ m}$
 $D = ?$

$$\downarrow F_g$$

$$\uparrow F_w = 1500 \text{ N}$$

$$\downarrow F_g$$

$$K_f = 0 \text{ J}$$

2 Parts

$$W = \Delta K \text{ (under)}$$

$$W = \Delta K \text{ (above)}$$