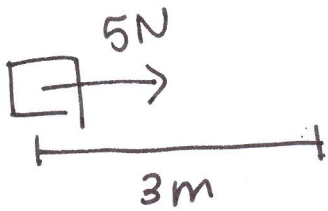


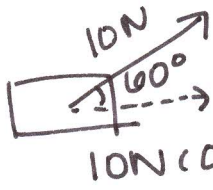
1.



$$W = F \cdot d$$

$$= (5\text{N})(3\text{m})$$

$$= 15\text{J}$$



$$W = F \cdot d$$

$$W = (5\text{N})(3\text{m})$$

$$W = 15\text{J}$$

only amount of force doing work

\* same for Both! \*

2. car mass = 2000 kg

$$v_{\text{car}} = 10\text{m/s}$$

$$KE_{\text{car}} = 100,000\text{J}$$

motorcycle mass = 250 kg

$$v_{\text{motorcycle}} = 15\text{m/s}$$

$$KE_{\text{motorcycle}} = 28,125\text{J}$$

\* car has a much greater mass!

3. \* This is negative work because the final energy would be less than the initial energy  $\Rightarrow$  the work takes energy away.

$$W = \Delta KE$$

$$W = KE_f - KE_i$$

$$W = \frac{1}{2}(3\text{kg})(7\text{m/s})^2 - \frac{1}{2}(3\text{kg})(15\text{m/s})^2$$

$$W = -264\text{J}$$

4. skip  $\rightarrow$  suppose to ask about power.

know that power is dependent on work & on time!