

[Power]

- **Power** is a quantity that measures the rate at which work is done or energy is transformed
 - How fast you do the job
 - Rate of energy transfer

$$P = W/\Delta t$$

power = work ÷ time interval

- Units for power – Watts (W) = J/s
- Horsepower (hp) another unit for power
- 1hp = 746 watts

[Power]

- Machines with different power ratings do the same amount of work in different time intervals
- An alternate equation for power in terms of force and speed is

$$P = \text{work/time} == F \cdot d/t = \mathbf{Fv}$$

power = force × speed

ALL 4 Mean the Same thing!