

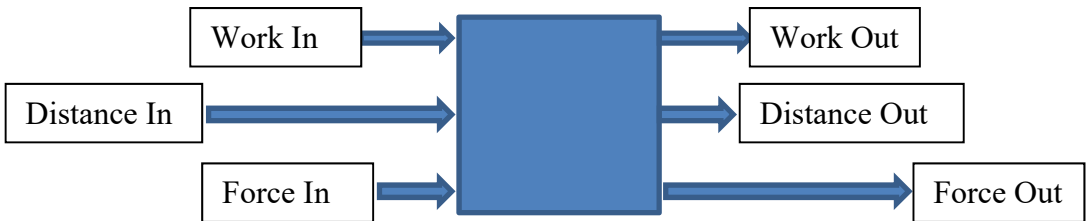
PSQ2T2 – Topics

Be sure to review old topics especially

- Metric Prefixes and Unit Conversions
- Significant Figures and Rounding
- Momentum and Impulse
- Work and Energy

New Material

- The concept of Simple Machines
 - Get out almost as much work as put in.
 - Get a mechanical advantage that usually means getting out more force than is put in.
 - Pay for the additional force by moving a greater distance.
- There are six kinds of simple machines:
 - Pulley
 - Inclined Plane
 - Wedge
 - Screw
 - Lever
 - Wheel and Axle



- Ideal Mechanical Advantage is calculated from the design of the machine by finding the ratio of the Distance In to the Distance Out

$$\text{Ideal Mech. Adv.} = \frac{d_{in}}{d_{out}}$$

- Real Mechanical Advantage is determined from measured performance of the machine by finding the ratio of the Force Out to the Force In.

$$\text{Real Mech. Adv.} = \frac{F_{out}}{F_{in}}$$

- Efficiency is calculated as the ratio of Work Out to Work In and is expressed as a percent.

$$Eff = \frac{W_{OUT}}{W_{IN}} \times 100$$