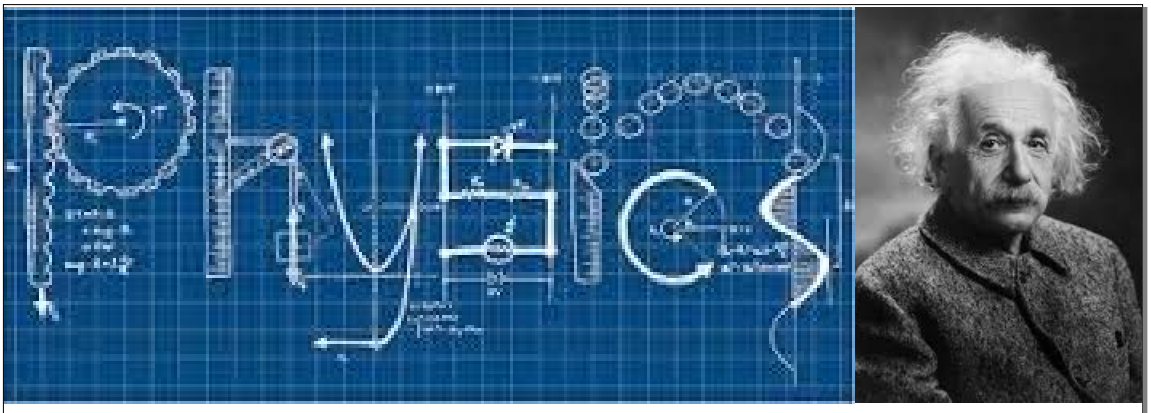
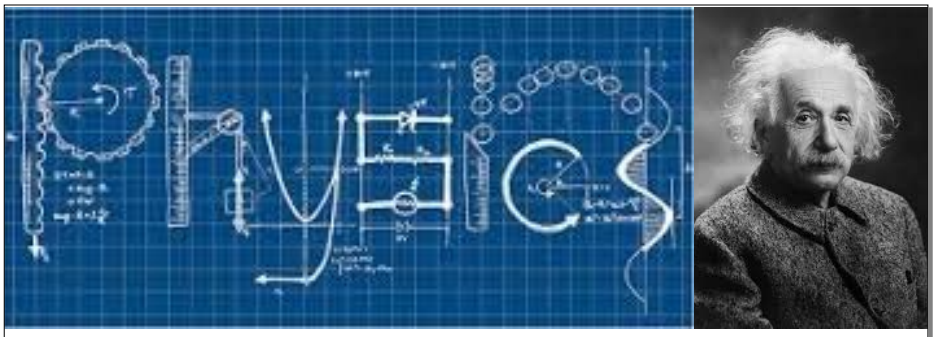


2.9 Efficiency

$$\% \text{ efficiency} = \frac{W_{output}}{W_{input}} \times 100\%$$

Work = Δ Energy



Ex.) A crane lifts an object with 4.5×10^5 J and the work done on the object is 3.8×10^4 J. What is the efficiency of the crane?

$$\% \text{ efficiency} = \frac{W_{output}}{W_{input}} \times 100\%$$

$$= \frac{3.8 \times 10^4}{4.5 \times 10^5} \times 100$$

$$= 8.4\% \text{ efficient}$$