

1 Work:

$$W = F \times s \quad (\text{kg m}^2 \text{s}^{-2})$$

Where F is a **force** (N) exerted along a **distance** (m) s .

2 Change in Potential Energy:

$$\Delta G = mgh \quad (\text{J})$$

Where m is an object's **mass** (kg), g the **acceleration** (ms^{-2}) due to gravity and h the **height** (m).

3 Kinetic Energy:

$$E_k = \frac{1}{2}mv^2 \quad (\text{J})$$

Where m is an object's **mass** (kg) and v its **velocity** (ms^{-1}).

4 Power:

$$P = \frac{E_c}{t} \quad (\text{W}) \qquad P = Fv \quad (\text{W})$$

Where E_c is the **energy converted** (J) and t the **time of conversion** (s).

Where F is the **tractive force** (N) and v the **velocity** (ms^{-1}).

5 Inclined plane:

Parallel

$$F = mg \sin \theta \quad (\text{N})$$

Perpendicular

$$F = mg \cos \theta \quad (\text{N})$$