National 4 Equation Sheet

$$P = \frac{E}{t}$$

$$power = \frac{energy}{time}$$

$$\%\ efficiency = \frac{useful\ E_o}{E_i}\ x\ 100\%$$

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$$\%\ efficiency = \frac{useful\ P_o}{P_i}\ x\ 100\%$$

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$$I_1 = I_2 = I_3$$

$$current_1 = current_2 = current_3$$

$$V_s = V_1 + V_2 + V_3$$

$$voltage_s = voltage_1 + voltage_2 + voltage_3$$

$$V = IR$$

$$voltage = current\ x\ resistance$$

$$\lambda = \frac{d}{\#}$$

$$wavelength = \frac{total\ distance}{number\ of\ waves}$$

$$f = \frac{\#}{t}$$

$$frequency = \frac{number\ of\ waves}{time}$$

$$v = f\lambda$$

$$speed = frequency\ x\ wavelength$$

$$d = \bar{v}t$$

$$distance = average\ speed\ x\ time$$

$$a = \frac{\Delta v}{t}$$

$$acceleration = \frac{change\ in\ speed}{time}$$

$$F = ma$$

$$force = mass\ x\ acceleration$$

$$W = mg$$

$$weight = mass\ x\ gravitational\ field\ strength$$