Science 8 Formula Sheet

Note: *A calculator may be used when writing Science 8 exams*

DENSITY

Acceptable density units:
g/cm^3, kg/m^3, g/mL, kg/L

$$\text{density} = \frac{\text{mass}}{\text{volume}} \qquad D = \frac{m}{V}$$

WORK

Unit of work is the joule: J
Unit of force is the newton: N
Unit of distance is the metre: m

$$\text{work} = \text{force} \times \text{distance}$$

$$W = F \times d$$

PRESSURE

Unit of pressure is the pascal: Pa
Unit of area is metres squared: m^2

$$\text{pressure} = \frac{\text{force}}{\text{area}} \qquad P = \frac{F}{A}$$

EFFICIENCY

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

MECHANICAL ADVANTAGE

$$\text{MA} = \frac{\text{output force}}{\text{input force}}$$

SPEED RATIO

$$\text{SR} = \frac{\text{input distance}}{\text{output distance}}$$