**Formula Sheet – PHYS 210 Final Exam**

You may need some of the constants and formulas below when writing this examination.

$g = 10\ \text{m/s}^2$

$G = 6.67 \times 10^{-11}\ \text{N} \cdot \text{m}^2/\text{kg}^2$

Absolute zero $= -273°\text{C}$

atmospheric pressure $= 100{,}000\ \text{N/m}^2$

air density $= 1.25\ \text{kg/m}^3$

Circumference of circle $= 2\pi r$

Area of circle $= \pi r^2$

Surface area of sphere $= 4\pi r^2$

Volume of sphere $= \frac{4}{3}\pi r^3$

$\Delta v = at$

$d = \frac{1}{2}at^2$

$F = G\dfrac{m_1\, m_2}{R^2}$

$\text{KE} = \frac{1}{2}mv^2$

$\text{PE} = mgh$

$Q = c\, m\, \Delta T$

$\text{Ideal efficiency} = \dfrac{T_{\text{hot}} - T_{\text{cold}}}{T_{\text{hot}}}$

$\text{Density} = \dfrac{\text{mass}}{\text{volume}}$

Force = mass × acceleration

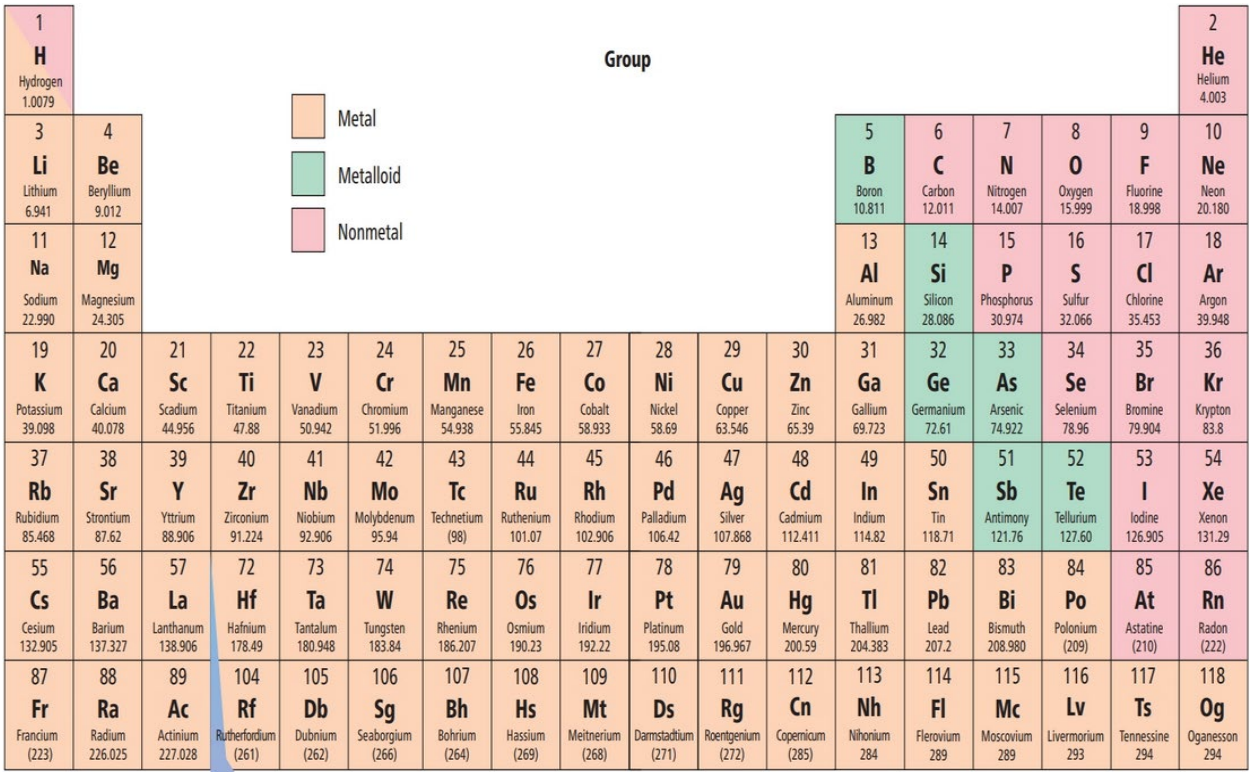
Momentum = mass × velocity

Impulse = force × time interval

Work = force × distance

$\text{power} = \dfrac{\text{work}}{\text{time}}$

# Periodic Table of the Elements




**Source:** Hewitt, P. G. (2021). *Conceptual Physics* (13th ed., p. 246) [Ebook]. Pearson.