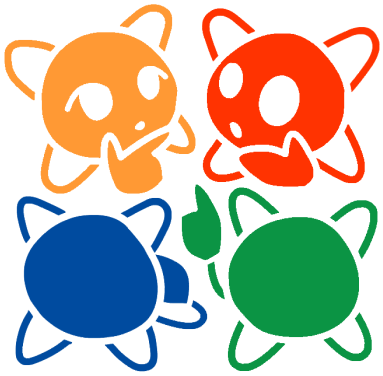

Singapore Physics League: Data Sheet

Acceleration of free fall,	$g = 9.81\ \text{m s}^{-2}$
Newton's gravitational constant,	$G = 6.67 \times 10^{-11}\ \text{m}^3\ \text{kg}^{-1}\ \text{s}^{-2}$
Speed of light in free space,	$c = 3.00 \times 10^{8}\ \text{m s}^{-1}$
Permittivity of free space,	$\varepsilon_0 = 8.85 \times 10^{-12}\ \text{C}^2\ \text{N}^{-1}\ \text{m}^{-2}$
Permeability of free space,	$\mu_0 = 4\pi \times 10^{-7}\ \text{T m A}^{-1}$
Planck's constant,	$h = 6.63 \times 10^{-34}\ \text{J s}$
Elementary charge,	$e = 1.60 \times 10^{-19}\ \text{C}$
Atomic mass unit,	$u = 1.66 \times 10^{-27}\ \text{kg}$
Rest mass of proton,	$m_p = 1.67 \times 10^{-27}\ \text{kg} = 1.007u$
Rest mass of electron,	$m_e = 9.11 \times 10^{-31}\ \text{kg} = 0.000549u$
Avogadro constant,	$N_A = 6.02 \times 10^{23}\ \text{mol}^{-1}$
Molar gas constant,	$R = 8.31\ \text{J mol}^{-1}\ \text{K}^{-1}$
Boltzmann constant,	$k = 1.38 \times 10^{-23}\ \text{J K}^{-1}$
Stefan-Boltzmann constant,	$\sigma = 5.67 \times 10^{-8}\ \text{W m}^{-2}\ \text{K}^{-4}$
Standard atmospheric pressure,	$P_0 = 1.01 \times 10^{5}\ \text{Pa}$
Speed of sound in air,	$v_s = 340\ \text{m s}^{-1}$
Density of water,	$\rho_w = 1000\ \text{kg m}^{-3}$
Specific heat capacity of water,	$c_w = 4.19 \times 10^{3}\ \text{J kg}^{-1}\ \text{K}^{-1}$
Specific latent heat of fusion of water,	$l_f = 3.34 \times 10^{5}\ \text{J kg}^{-1}$
Specific latent heat of vaporization of water,	$l_v = 2.26 \times 10^{6}\ \text{J kg}^{-1}$