

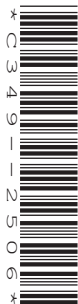


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Data Sheet

Unit 1 Science fundamentals

Unit 2 Laboratory techniques



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- This document has **2** pages.

Unit 1

Density (kg/m^3) = mass (kg) $\div$ volume (m^3)

Current (A) = number of electrons per $\text{m}^3 \times$ cross-sectional area of conductor (m^2) $\times$ drift velocity (m s^{-1}) $\times$ electron charge (C)

$I = \Delta Q \div \Delta t$

Potential difference (V) = current (A) $\times$ resistance (Ω)

Charge (C) = current (A) $\times$ time (s)

Power (W) = energy (J) $\div$ time (s)

Power (W) = potential difference (V) $\times$ current (A)

Energy transferred (work done) (J) = charge (C) $\times$ potential difference (V)

Energy transferred (J, kWh) = power (W, kW) $\times$ time (s, h)

Area of a circle = πr^2

Circumference of a circle = $2\pi r$

Current flow:

Series $R_t = R_1 + R_2 + R_3$

Parallel $\frac{1}{R_t} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$

Unit 2

$n = c \times V$

where:

c = concentration (mol dm^{-3})

n = number of moles

V = volume (dm^3)

Magnification = measured size $\div$ actual size

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