

Hello World Program

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1 Problem 0

Hello World!

2 Problem 1

1. $5000 \pm 5\Omega$
2. $1000 \pm 1\Omega$
3. $3000 \pm 3\Omega$
4. $10000 \pm 10\Omega$
5. $100000 \pm 100\Omega$

3 Problem 2

Euler's formula, given by $e^{ix} = \cos x + i \sin x$, establishes the fundamental relationship between the trigonometric functions and the complex exponential function.

4 Problem 3

$$\int_{T_0}^{T_1} x^2 dx = \frac{1}{3}(T_1^3 - T_0^3)$$

5 Problem 4

$$\delta x = \sqrt{\frac{1}{N(N-1)} \sum_{n=1}^N (x_i - \bar{x})^2}$$

6 Problem 5

DMM Uncertainties	
DMM Model	MASTECH MS8268
Resistance:	$\delta R = (1.2 \% \text{ of rdg} + 2 \text{ digits})$
DC Voltage:	$\delta V = (0.7 \% \text{ of rdg} + 2 \text{ digits})$
DC Voltage:	$\delta I = (1.2 \% \text{ of rdg} + 3 \text{ digits})$

7 Problem 6

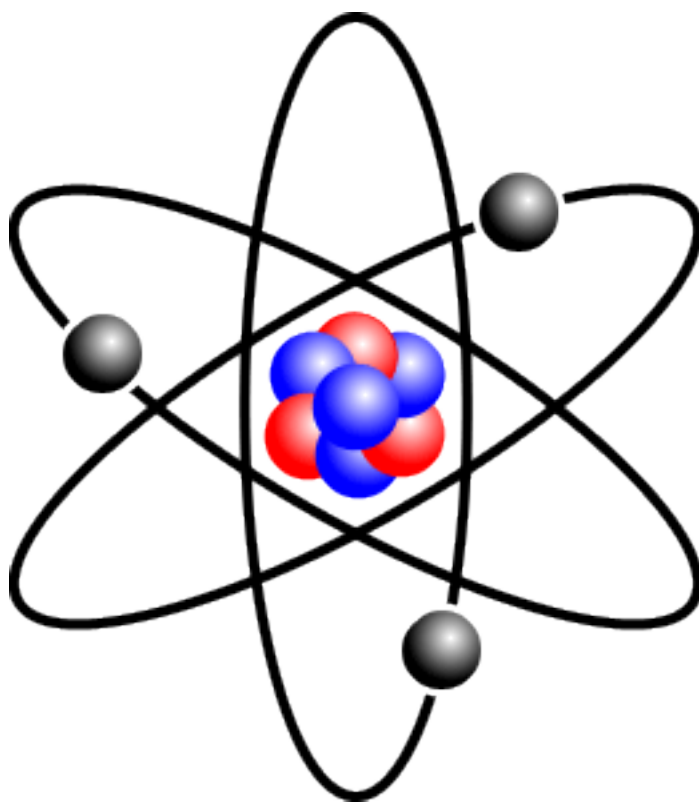


Figure 1: **Figure 3.2:** A picture of an atom.