

# Typesetting in L<sup>A</sup>T<sub>E</sub>X

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## Problem 1.

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.

## Problem 2.

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

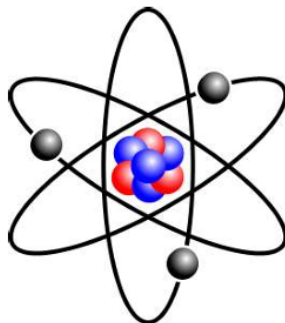
## Problem 3.

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

## Problem 4.

DMM Uncertainties	
DMM Model	MASTECH MS82268
Resistance:	$\delta R = (1.2\% \text{ of rdg} + 2 \text{ digits})$
DC Voltage:	$\delta R = (0.7\% \text{ of rdg} + 2 \text{ digits})$
DC Current:	$\delta R = (1.2\% \text{ of rdg} + 3 \text{ digits})$

## Problem 5.



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