

CSE 4714 (SWE) 2024 Section B Lab 2

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1 Modes

First of all, there are two modes.

1.1 Inline math

We can write a mathematical expression as, $(a + b)^2 = a^2 + 2ab + b^2$. We can also write inline maths as $(a + b)^2 = a^2 + 2ab + b^2$. Or, $(a + b)^2 = a^2 + 2ab + b^2$.

1.2 Display Math

We can create display maths as,

$$(a + b)^2 = a^2 + 2ab + b^2$$

We can also write display maths with,

$$(a + b)^2 = a^2 + 2ab + b^2$$

Or, with,

$$a + b = 2 \tag{1}$$

$$a + b = 2 \tag{2}$$

$$(a + b)^2 = a^2 + 2ab + b^2 \tag{3}$$

In subsection 1.2, in Equation 3, we can find the formula for a plus b whole square.

2 Subscript and Superscript

$$X_{(i,j)}^{2000} = 10 \tag{4}$$

3 Math Operators

$$1 + 2 = 5 - 2 = 6/2 = 1.5 \times 2 \tag{5}$$

$$\sin^2\theta + \cos^2\theta = 1 \tag{6}$$

$$\sin^2\theta + \cos^2\theta = 1 = \log 10, \text{ this is a simple equation} \tag{7}$$

9 Sets and Vectors

$$A \cup B \cap C \in \mathbb{R} \quad (17)$$

$$\vec{A} = \vec{B} \quad (18)$$

$$\hat{i} \times \hat{j} = \hat{k} \quad (19)$$

$$\vec{A} \cdot \vec{B} = 5.32 \quad (20)$$

10 AMS Math Environments

$$a + b = 3$$

$$\begin{aligned} &1 + 2 + 3 + 4 + 1 + 2 + 3 + 4 + 1 + 2 + 3 + 4 + \\ &\quad 1 + 2 + 3 + 4 + 1 + 2 + 3 + 4 + 1 + 2 + 3 + 4 + \\ &\quad 1 + 2 + 3 + 4 + 1 + 2 + 3 + 4 + 1 + 2 + 3 + 4 + \\ &\quad 1 + 2 + 3 + 4 + 1 + 2 + 3 + 4 + 1 + 2 + 3 + 4 + \dots = \infty \end{aligned} \quad (21)$$

$$\begin{aligned} \frac{a}{b} &= \frac{5}{10} \\ &= \frac{1}{2} \\ &= 0.5 \end{aligned} \quad (22)$$

$$a + b + c = 5 \quad (23)$$

$$a - 2b + 4c = 15 \quad (24)$$

$$-5a - 2b + 7c = -5 \quad (25)$$

$$a + b + c = 5 \quad (26)$$

$$a = 15 \quad (27)$$

$$-2b + 7c = -5 \quad (28)$$

11 Matrices

$$I = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$$