CS-101 Homework 1

Your Name (Student ID)

September 12, 2025

1. Problem 1. [Think through]

Think. Use inline equations for simple math 1 + 1 = 2, and centered equations for more involved or important equations

$$a^2 + b^2 = c^2. (1)$$

Some people like to write scalars without boldface x + y = 1 and vectors or matrices in boldface

$$\mathbf{A}\mathbf{x} = \mathbf{b}.\tag{2}$$

An example of a matrix LATEX:

$$\mathbf{A} = \begin{pmatrix} 3 & -1 & 2 \\ 0 & 1 & 2 \\ 1 & 0 & -1 \end{pmatrix}. \tag{3}$$

With a labeled equation such as the following:

$$\frac{d^2x}{dt^2} = a\tag{4}$$

you can referrer to the equation later. In equation 8 we defined acceleration.

2. Problem 2.

Proof. Use inline equations for simple math 1 + 1 = 2, and centered equations for more involved or important equations

$$a^2 + b^2 = c^2. (5)$$

Some people like to write scalars without boldface x + y = 1 and vectors or matrices in boldface

$$\mathbf{A}\mathbf{x} = \mathbf{b}.\tag{6}$$

An example of a matrix LATEX:

$$\mathbf{A} = \begin{pmatrix} 3 & -1 & 2 \\ 0 & 1 & 2 \\ 1 & 0 & -1 \end{pmatrix}. \tag{7}$$

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With a labeled equation such as the following:

$$\frac{d^2x}{dt^2} = a \tag{8}$$

you can referrer to the equation later. In equation 8 we defined acceleration.

2 Your Name