ORCS 4529: Fall 2025

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## **Due:** 09/09/2025 11:59 PM ET

## Problem 1

I have looked through the course resources.

## Problem 2

- (a) I can write inline math equations:  $\sum_{k=1}^{n} k = \frac{n(n+1)}{2}$ .
- (b) I can also write display math equations:

$$\frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} e^{-x^2/2} dx = 1.$$

(c) Let  $\mathbf{x}_1, ..., \mathbf{x}_d \in \mathbb{R}^n$  be a list of vectors. We can write a linear combination  $\mathbf{y} \in \mathbb{R}^n$  of these vectors as:

$$\mathbf{y} = \sum_{i=1}^{d} w_i \mathbf{x}_i.$$

(d) I'm excited to learn some math for machine learning!

## Problem 3

I've filled out the pre-course survey and sent Sam an email.