

## CS 3710: Intro to Cybersecurity Final Exam, summer 2023

**Name** \_\_\_\_\_

You **MUST** write your e-mail ID on **EACH** page. And put your name on the top of this page, too.

If you are still writing when “pens down” is called, your exam will be ripped up and not graded. So please do that first. Sorry to have to be strict on this!

There are 6 pages to this exam. Once the exam starts, please make sure you have all the pages. Questions are worth different amounts of points.

**Answers for the short-answer questions should not exceed about 20 words; if your answer is too long (say, more than 30 words), you will get a zero for that question!**

This exam is **CLOSED** text book, closed-notes, closed-calculator, closed-cell phone, closed-computer, closed-neighbor, etc. Questions are worth different amounts, so be sure to look over all the questions and plan your time accordingly. Please sign the honor pledge below.

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*Plz enable me*

*I'm just a tiny macro*

*Docs wiped. Kthnxbai.*









Page 6: No questions here

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MISS LENHART COULDN'T BE HERE TODAY, SO SHE ASKED ME TO SUBSTITUTE.

MATH

MR. MUNROE

I'VE PUT OUT YOUR TESTS. PLEASE GET STARTED.

MR. MUNROE, MISS LENHART NEVER TAUGHT US THIS.

THAT'S BECAUSE MISS LENHART DOESN'T UNDERSTAND HOW IMPORTANT CERTAIN KINDS OF MATH ARE.

BUT THIS JUST LOOKS --

THIS MATERIAL IS MORE VITAL THAN ANYTHING YOU'VE EVER LEARNED

BUT --

NO BUTS.

THIS IS A MATTER OF LIFE AND DEATH.

Name: \_\_\_\_\_

1. The velociraptor spots you 40 meters away and attacks, accelerating at  $4 \text{ m/s}^2$  up to its top speed of  $25 \text{ m/s}$ . When it spots you, you begin to flee, quickly reaching your top speed of  $6 \text{ m/s}$ . How far can you get before you're caught and devoured?

2. You are at the center of a  $20\text{m}$  equilateral triangle with a raptor at each corner. The top raptor has a wounded leg and is limited to a top speed of  $10 \text{ m/s}$ .

(Not to scale)

The raptors will run toward you. At what angle should you run to maximize the time you stay alive?

3. Raptors can open doors, but they are slowed by them. Using the floor plan on the next page, plot a route through the building, assuming raptors take 5 minutes to open the first door and halve the time for each subsequent door. Remember, raptors run at  $10 \text{ m/s}$  and they do not know fear.