MATH 111
Test Prep 1
Winter 2023

Name _____

Student ID #_____   Section _____

HONOR STATEMENT

"I affirm that my work upholds the highest standards of honesty and academic integrity at the University of Washington, and that I have neither given nor received any unauthorized assistance on this exam."

SIGNATURE:_____

- This test prep consists of one page of questions (on the back of this sheet).

- You will have 20 minutes from the moment the TAs tell you to start.

- You are allowed to use a non-graphing scientific calculator, a ruler, and one 8.5 by 11 inch sheet of handwritten notes (front and back). All other sources are forbidden.

- Turn your cell phone OFF and put it away for the duration of the test prep. You may not listen to headphones or earbuds during the test prep.

- **You must show your work.** Clearly label lines and points that you are using and show all calculations. The correct answer with no supporting work may result in no credit.

- Unless otherwise indicated, when rounding is necessary, you may round your final answer to two digits after the decimal.

- **Do not write within 1 centimeter of the edge!** Your test prep will be scanned for grading.

- There are multiple versions of the test prep, you have signed an honor statement, and cheating is a hassle for everyone involved. If we find that you give an answer that is only appropriate for the other version of the test prep and there is no work to support your answer, then you will get a zero on the entire test prep and your work will be submitted to the academic misconduct board. JUST DO NOT CHEAT.

GOOD LUCK!

1. (13 pts) Your friend goes for a bike ride. The distance, $D(t)$, in **feet** traveled by your friend after t **second** is given by the graph:
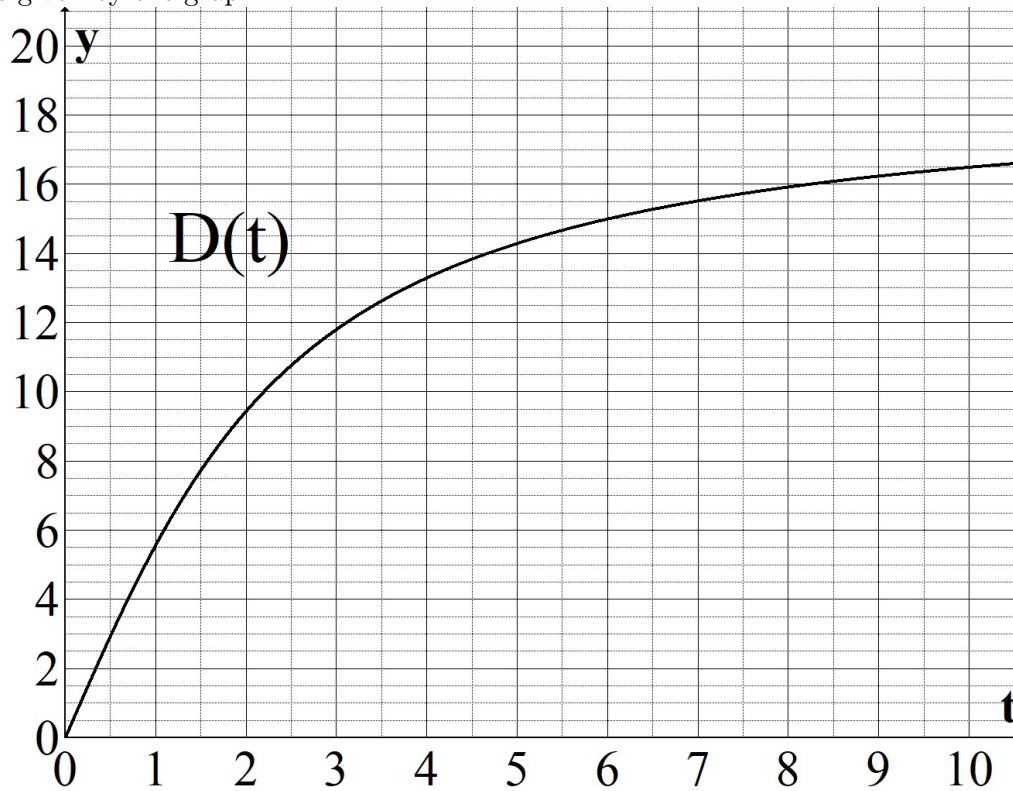
For each part, clearly label your work in the graph and show the numbers/points in your calculations.

(a) Find the average speed over the 3-second interval starting at $t = 7$ second. (Give the units)

Average Speed = _____ UNITS = _____

(b) Find the largest interval when Average Trip Speed is between 2 feet/second and 3 feet/second.

$t =$ _____ to $t =$ _____ seconds

(c) Find the value of t at which $D(t) - D(1) = 10$.

$t =$ _____ seconds

(d) You decide to go for a bike ride as well. You start at the same time and place, but you travel at a constant speed of 1.7 feet/second. Find the time when your friend is farthest ahead of you and estimate the distance between you and your friend at this time.

$t =$ _____ seconds

Distance ahead = _____ feet