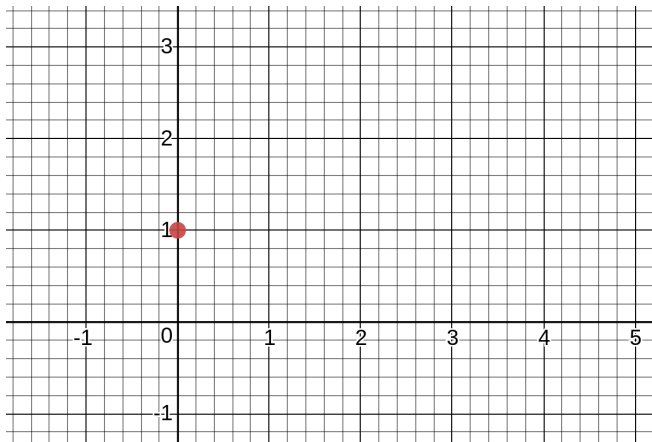


Section number:

Name of recitation instructor:

Names of team members:

Exercise 1 Sketch the trace of the sequence described in the Lab document. Compute the total distance traveled by the tracer.



Distance traveled =

Exercise 2 Every $1/10$ of a second, the turning speed of the two knobs are measured (in units of “length unit per second”). The results are $\frac{\Delta y_1}{\Delta t}, \frac{\Delta y_2}{\Delta t}, \dots, \frac{\Delta y_N}{\Delta t}$ for the left knob and $\frac{\Delta x_1}{\Delta t}, \frac{\Delta x_2}{\Delta t}, \dots, \frac{\Delta x_N}{\Delta t}$ for the right knob. If the tracer starts at the point with coordinate $(0, 0)$:

After the first $\frac{1}{10}$ s, the location of the tracer is approximately: (,).

After the first N measurements (so $N/10$ seconds passed), the coordinate of the tracer is approximately:

After the first N measurements, the total distance traveled by the tracer is approximately:

Exercise 3 Why is it that the formulas you found for Exercise 2 are only approximate and not exact? Give a brief justification.

Exercise 4 The number of laps covered:

The Corvette is going (circle one): clockwise counterclockwise.

The entry numbers when the car returned to its starting position:

1, 15800,

Exercise 5 The track length is estimated from your code to be: meters

Copy below the MATLAB code you used to reach this conclusion: