

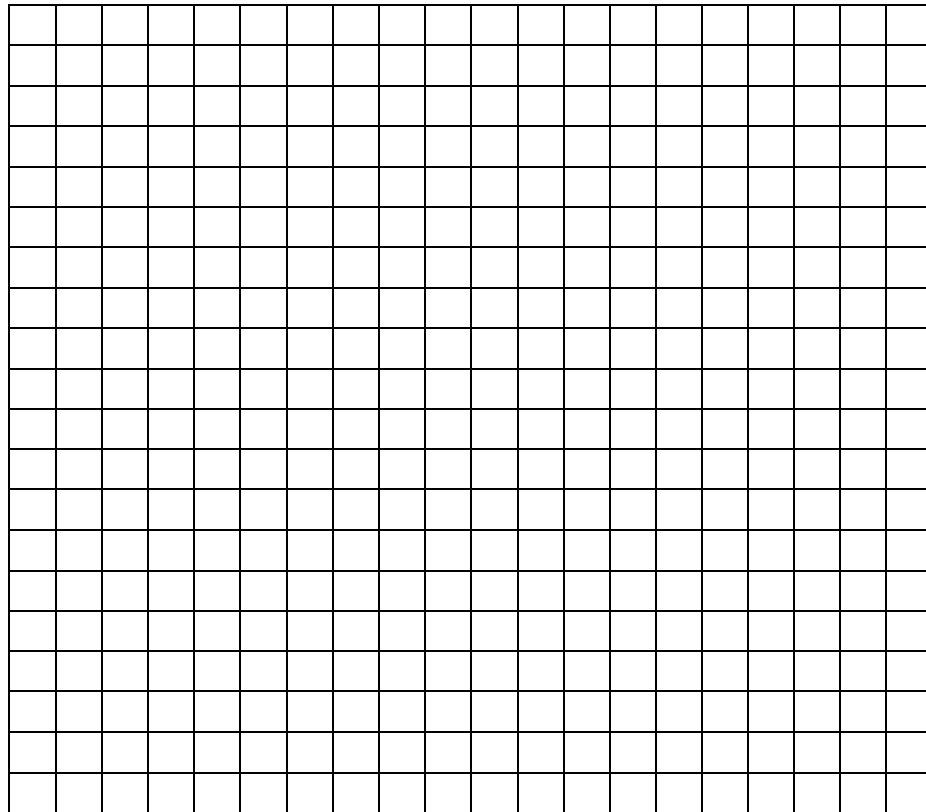
Name: \_\_\_\_\_

### Speed and Graphs Assessment

1. What is the speed of a kayak traveling 100 meters in 140 seconds?
  - a. 1.4 m/s
  - b. 0.71 m/s
  - c. 40 m/s
2. Calculate the speed of an armadillo running through a yard covering 24 meters in 52 seconds.
  - a. 0.54 m/s
  - b. 2.2 m/s
  - c. 0.46 m/s
3. Sara is a cross-country runner and she covers a distance of 250 meters in 150 seconds. What is her speed?
  - a. 0.6 m/s
  - b. 1.7 m/s
  - c. 1.3 m/s
4. What is the speed of a bobcat that runs a distance of 1.2 miles in 2.4 minutes?
  - a. 0.5 miles/minute
  - b. 2 miles/minute
  - c. 2.9 miles/minute
5. What is the speed of a football traveling 52 meters in 1.9 seconds?
  - a. 46.8 m/s
  - b. 0.037 m/s
  - c. 27.4 m/s

Use this data table to create a speed vs. time graph and then answer the questions below, using your graph. Use the back of your paper for calculations. Each object was rolled downhill from a height of 1 meter.

	0.1 m	0.2 m	0.3 m	0.4 m	0.5 m	0.6 m	0.7 m	0.8 m	0.9 m	1 m
Marble	.25 s	.30 s	.34 s	.40 s	.48 s	.48 s	.48 s	.49 s	.48 s	.49 s
Golf ball	.16 s	.20 s	.25 s	.31 s	.37 s	.45 s	.45 s	.46 s	.45 s	.45 s



Use the graph you just created to answer these questions.

1. Which object had a faster average speed at 0.4 meters?
  - a. Marble
  - b. Golf ball
  
2. What was the average speed of the golf ball for the entire trip down the ramp?
  - a. 2.10 m/s
  - b. 2.19 m/s
  - c. 2.22 m/s
  - d. 3.01 m/s
  
3. What was the average speed of the marble for the entire trip down the ramp?
  - a. 2.08 m/s
  - b. 2.04 m/s
  - c. 3.09 m/s
  - d. 4.90 m/s
  
4. Which object had a faster average speed at 0.7 meters?
  - a. Marble
  - b. Golf ball
  
5. Which object had a faster average speed at 0.2 meters?
  - a. Marble
  - b. Golf ball

## Assessment Answer Key

### Page 1

1. B
2. C
3. B
4. A
5. C

### Page 2

Check for correct plot points on the graph as well as correct x and y axis labels and a title.

Average speeds:

	0.1 m	0.2 m	0.3 m	0.4 m	0.5 m	0.6 m	0.7 m	0.8 m	0.9 m	1.0 m
Marble	0.4 m/s	0.67 m/s	0.88 m/s	1.0 m/s	1.04 m/s	1.25 m/s	1.46 m/s	1.63 m/s	1.88 m/s	2.04 m/s
Golf ball	0.62 m/s	1.0 m/s	1.2 m/s	1.29 m/s	1.35 m/s	1.33 m/s	1.56 m/s	1.74 m/s	2.0 m/s	2.22 m/s

### Page 3

1. B
2. C
3. B
4. B
5. B