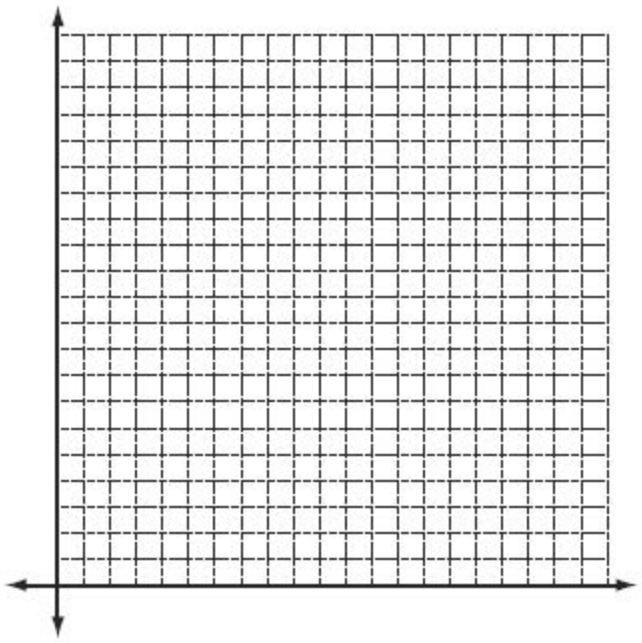
Comparing Function Lab Results

Using the results from the previous labs for this project, graph *time vs. speed* of each type of movement (linear, quadratic and exponential) onto the same coordinate plane. Afterwards, answer the questions that follow.



What do you notice about the speed of Linkbot whose graph was linear?
What do you notice about the speed of Linkbot whose graph was quadratic?
What do you notice about the speed of Linkbot whose graph was exponential?

Add a row for 7 seconds and predict what the average speed will be for each.

Which graph would you like your Linkbot to match? Why?

Share your predictions for 7 seconds with other groups and record them below:

Name:					Group Average
Linear					
Quadratic					
Exponential					

Use your Group Average and the graph to figure out where each bot will be at the end of the race to 7 seconds.

	Degrees at 6 seconds	Predicted degrees traveled from 6-7 seconds	Degrees predicted at 7 seconds
Linear			
Quadratic			
Exponential			

For each Linkbot put a point using the appropriate shape on your graph from the beginning of this worksheet; does it fit with the existing points?

How far from the starting line will the point you put on your graph be?

Linear	
Quadratic	
Exponential	

Place a dot where you think each Linkbot will reach at the end of 7 seconds.

After 7 second run:

How far were your predictions from the actual resting place?

For your prediction that was the furthest away from the actual resting place, how would you adjust it? Does that change anything about how you were thinking about the different speeds?

Which graph would you like your Linkbot to match? Why?