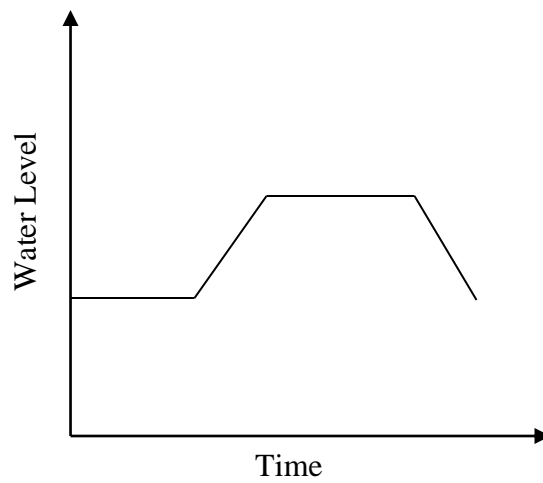


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Analyzing & Sketching Graphs



Name: _____

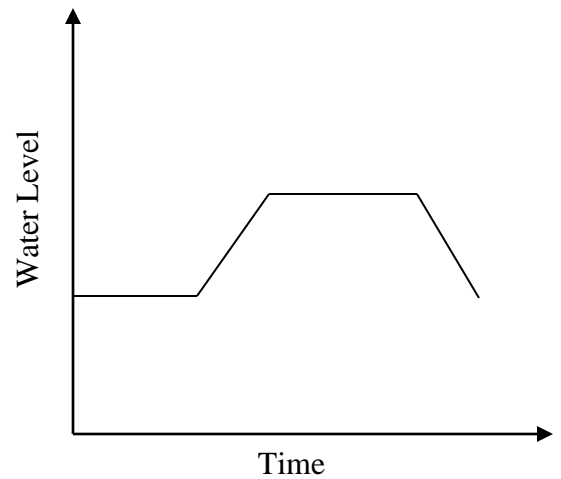
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Analyzing and Sketching Graphs

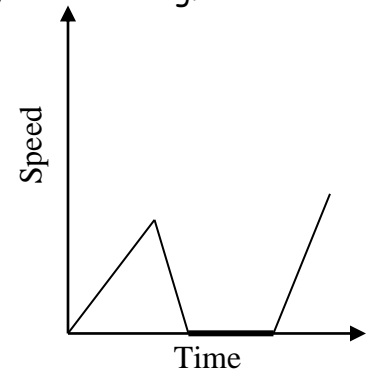
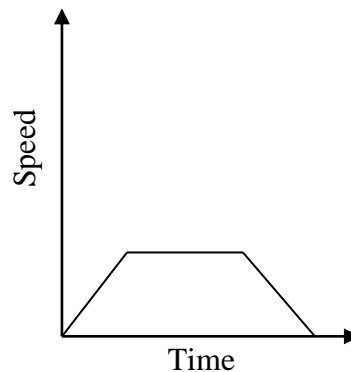
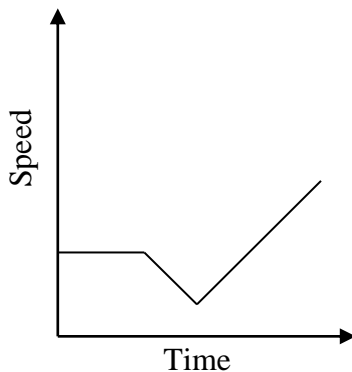
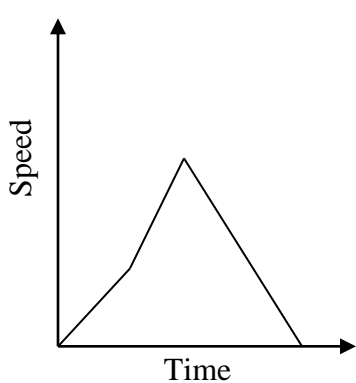
Working with your teammates, look at the following graph and answer the questions below.

- a) Write a few sentences that describes how the water level changes over time.



- b) What situation can this graph represent?

You are riding a bike. Match each situation with the appropriate graph. **Explain your reasoning.**



- a) You gradually increase your speed, then ride at a constant speed along a bike path. You then slow down until you reach your friend's house.
- b) You gradually increase your speed, then go down a hill. You then quickly come to a stop at an intersection.
- c) You gradually increase your speed, then stop at a store for a couple of minutes. You then continue to ride, gradually increasing your speed.
- d) You ride at a constant speed, then go up a hill. Once on the top of the hill, you gradually increase your speed.

Name: _____

Date: _____

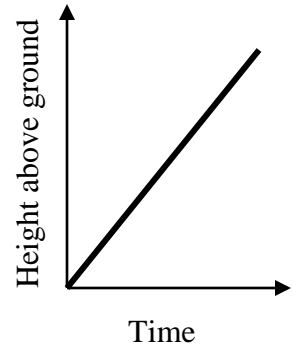
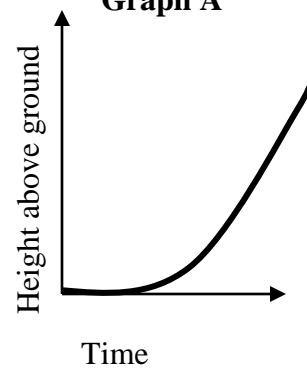
The graphs represent the height of a rocket and a weather balloon after they are launched.

Graph B

a) How are the graphs similar? How are they different?

b) Compare the steepness of each graph. Which graph do you think represents the height of the rocket? Explain.

Graph A

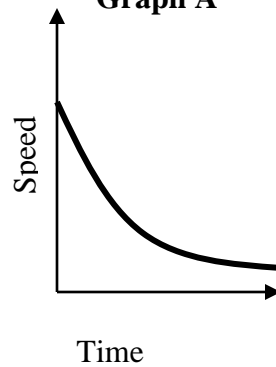


The graphs represent the speeds of two cars. One car is approaching a stop sign. The other car is approaching a yield sign.

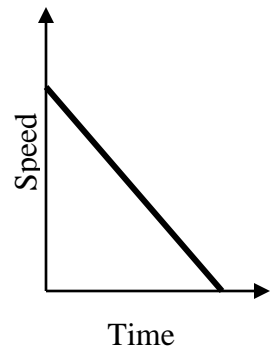
a) How are the graphs similar? How are they different?

b) Compare the steepness of each graph. Which graph do you think represents the car approaching a stop sign? Explain.

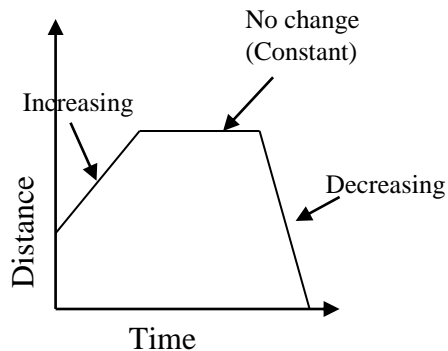
Graph A



Graph B



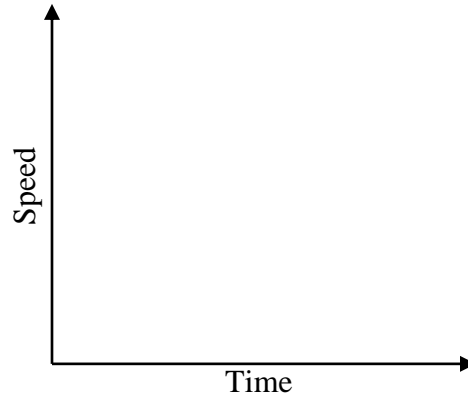
Graphs can show the relationship between quantities without using specific numbers on the axes.



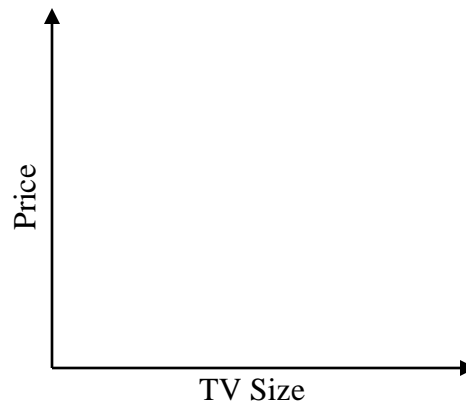
Sketching Graphs

Sketch a graph that represents each situation. Be prepared to show and explain your reasoning behind your graph.

- 1) A stopped subway train gains speed at a constant rate until it reaches its maximum speed. It travels at this speed for a while, and then slows down at a constant rate until coming to a stop at the next station.



- 2) As television size increases, the price increases at an **increasing** rate. (Is it linear?)



- 3) A fully charged battery loses its charge at a constant rate until it has no charge left. You plug it in and recharge it fully. Then it loses its charge at a constant rate until it has no charge left.

