Key

Algebra 1

3.1 Notes

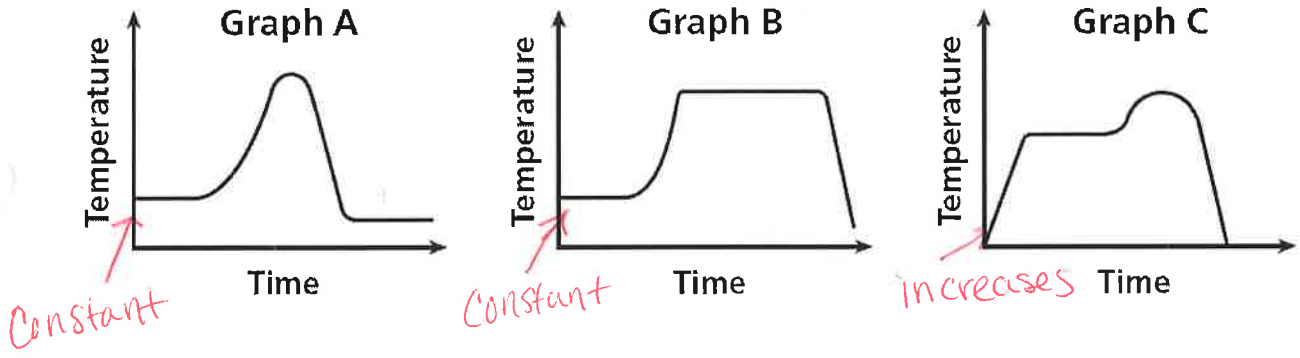
Graphing Relationships

Warm Up

State whether each word or phrase represents an amount that is increasing, decreasing, or constant.

1. stays the same → constant ex: height of door, temp, speed (cruise control)
2. rises → increasing ex: age, height (to a point), shoe size
3. drops → decreasing ex: temperature, grades (seasonally)
4. slows down → decreasing ex: car, metabolism

Example 1: Choose the graph that best represents this situation.



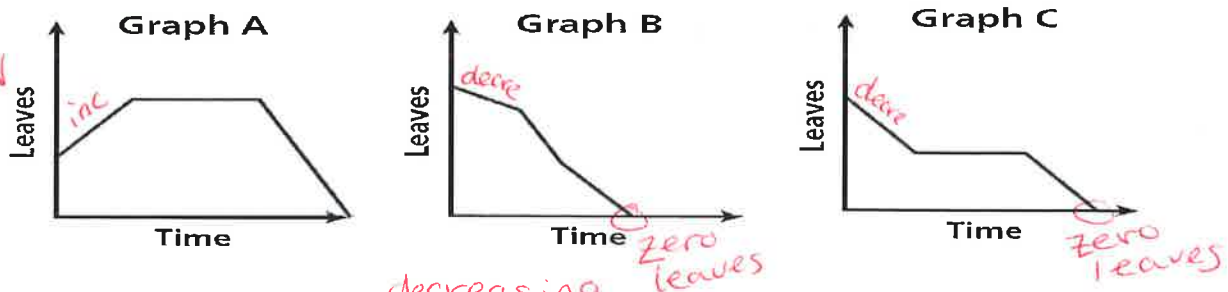
a.) The air temperature increased steadily for several hours and then remained constant. At the end of the day, the temperature increased slightly before dropping sharply. Graph C → matches the steps

b.) The air temperature was constant for several hours at the beginning of the day then rose steadily for several hours. It stayed the same temperature for most of the day before dropping sharply at sundown.

Graph B → matches the steps

Example 2: Choose the graph that best represents this situation.

# of leaves on tree



Each day several leaves fall from a tree. One day a gust of wind blows off many leaves. Eventually, there are no more leaves on the tree.

decreasing

bigger decrease

Graph B

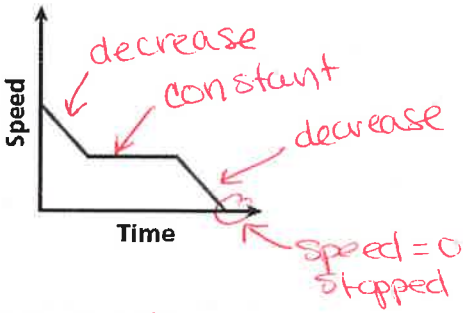
Continuous graph: graphs that have connected lines and curves

Discrete graph: graphs that have only distinct points

ex: Keyboarding { take a weekly test to see how wpm improved

Example 3: Label each situation as continuous or discrete. Then, write a possible situation for the graph shown.

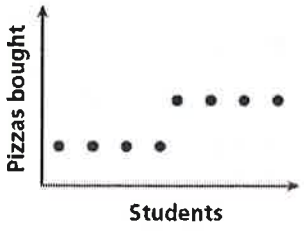
a.)



a) Continuous

b) As you approach the accident, you slow down, then you go constant slow speed. Then you slow more and then stop.

b.)



a) discrete

b) one pizza was bought for the 1st four students. Once the fifth student joined, they needed to buy another pizza.