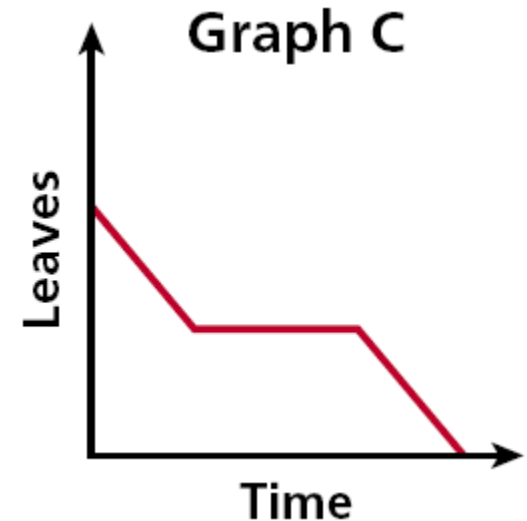
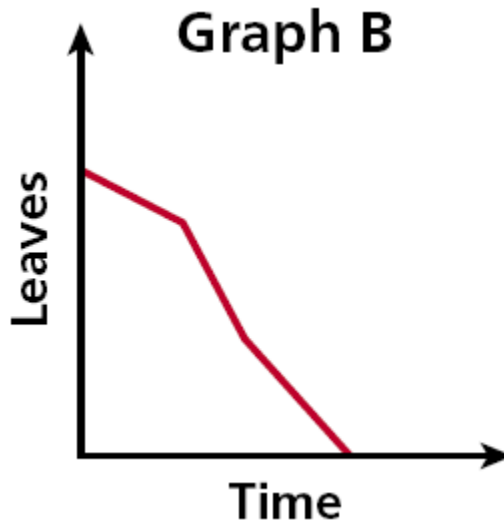
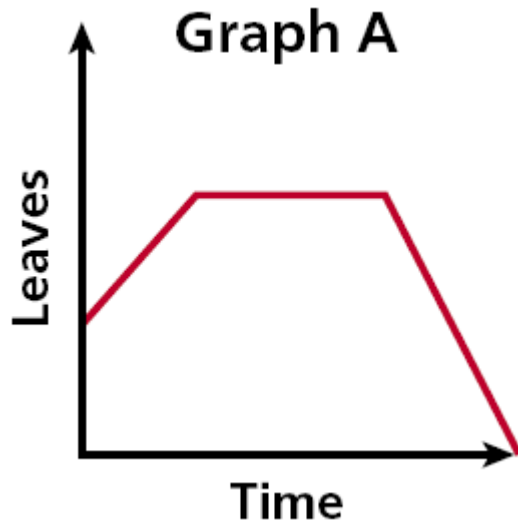


**Each day several leaves fall from a tree. One day a gust of wind blows off many leaves. Eventually, there are no more leaves on the tree. Choose the graph that best represents the situation.**

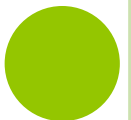
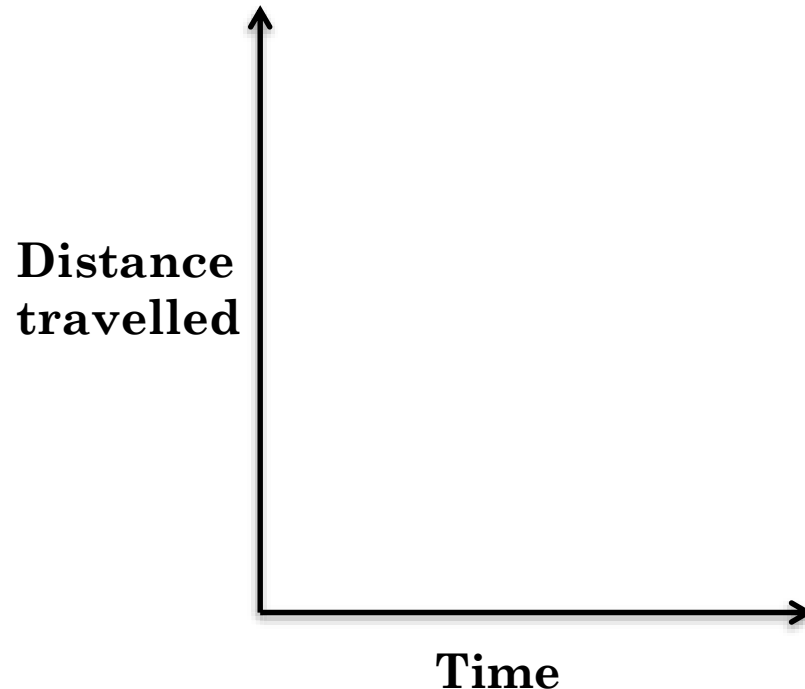


**Graph  
B**



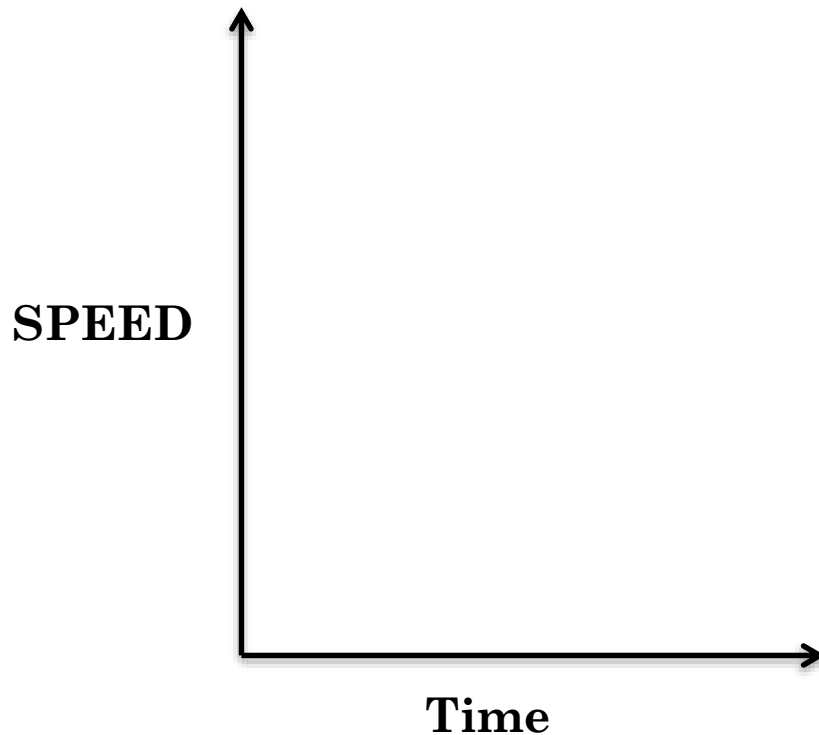
## DRAW A GRAPH:

- You leave your house walking at a slow rate. After a few minutes, you see a pack of zombies, so you start running at a faster rate. After a few more minutes, you lose the zombies, so you stop.

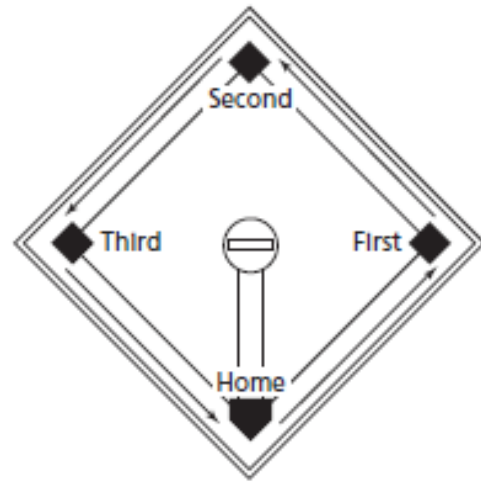


## DRAW A GRAPH:

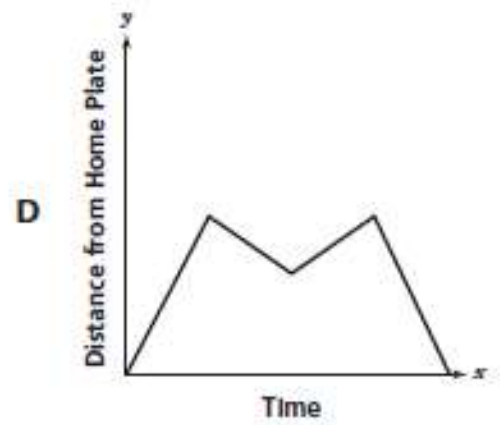
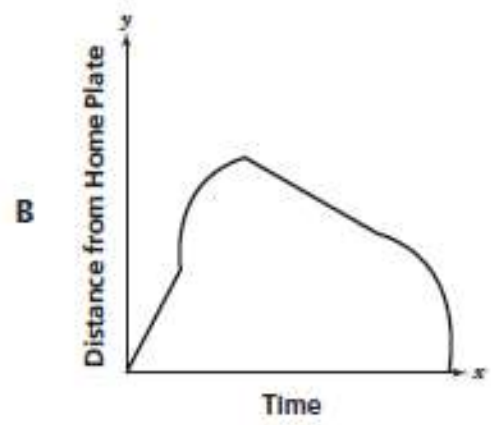
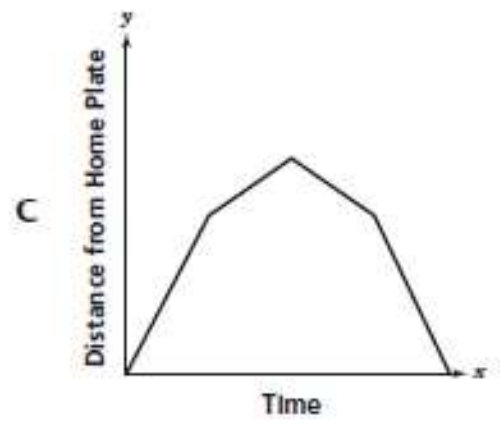
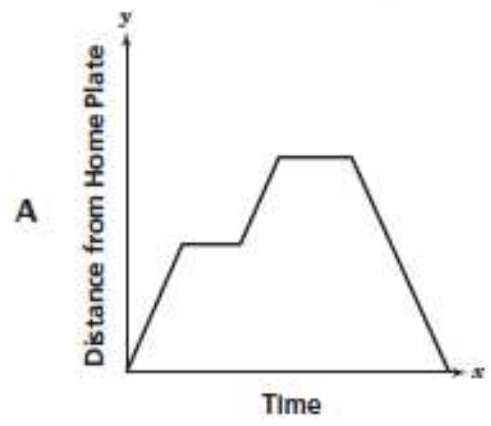
- You leave your house walking at a slow rate. After a few minutes, you see a pack of zombies, so you start running at a faster rate. After a few more minutes, you lose the zombies, so you stop.



A baseball player hits a home run by being able to run in a straight line from home plate, to first base, second base, third base and back to home plate in one play. A diagram of a baseball diamond and the path the player must run is shown below.

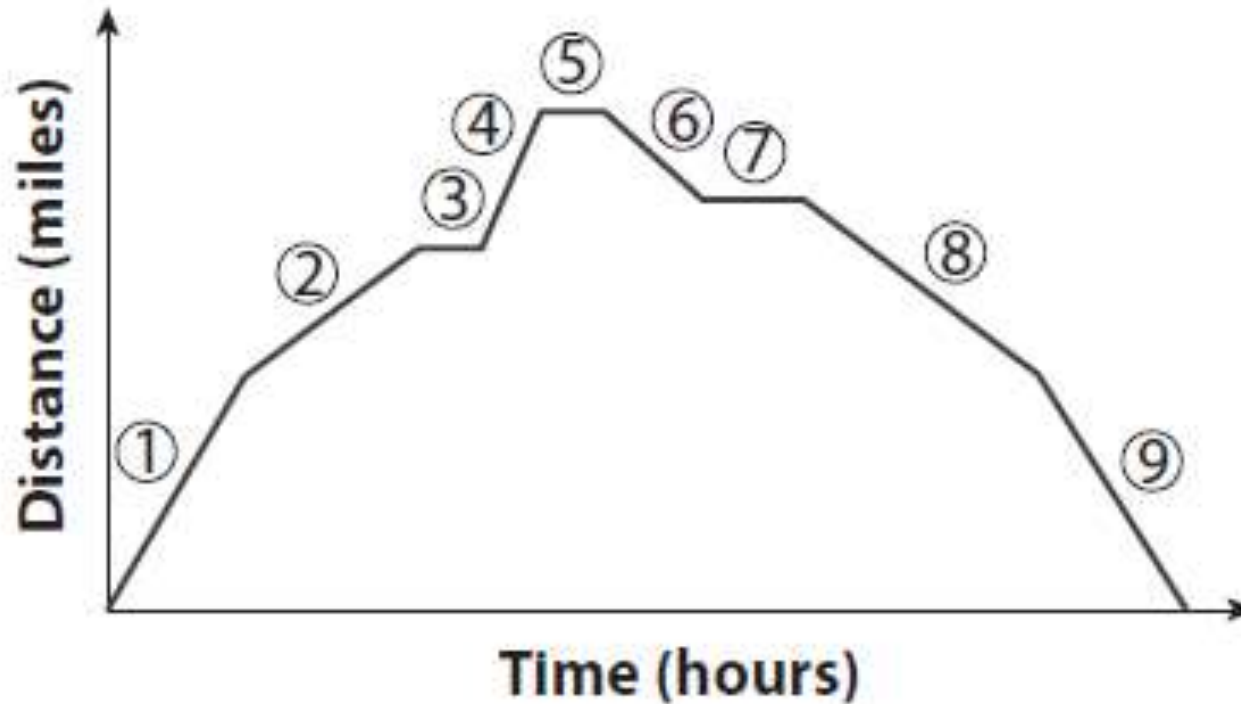


Which graph best represents the distance between the baseball player and home plate as he runs the bases after hitting a home run?



C

The distance a delivery van is from the warehouse varies throughout the day. The graph shows the distance from the warehouse for a day from 8:00 am to 5:00 pm.



- (A) Segment 1 shows that the delivery van moved away from the warehouse. What does segment 2 show?

**The truck moves away from the warehouse but at a slower speed.**

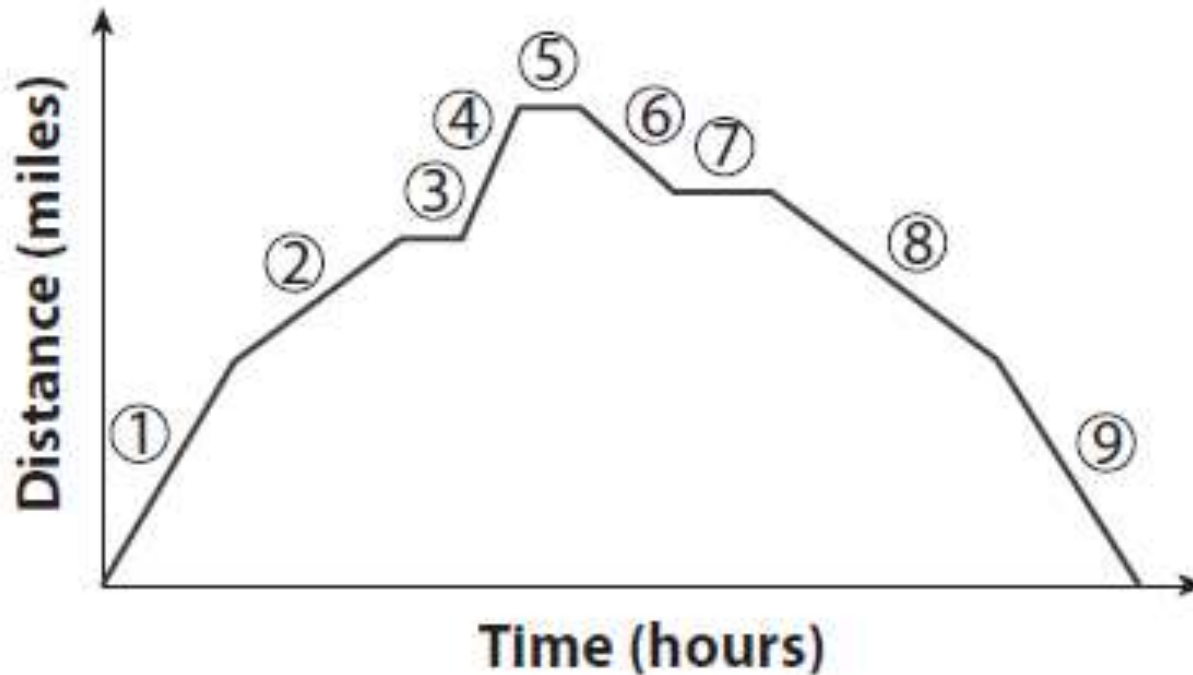


- Ⓑ Based on the time frame, what change in the distance from the warehouse is represented by segment 6?

**It's the time when the truck starts to return home.**

- Ⓒ Which line segments show intervals where the distance did not change?

**3, 5, and 7**



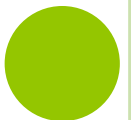
D What is a possible explanation for these segments?

**It's when the truck has stopped moving but time continues, like at a stop light.**

Discuss: Explain how the slope of each segment of the graph is related to whether the delivery truck is not moving, is moving away from, or is moving toward the warehouse.

**When the slope is positive (segment rises from left to right), the truck is moving away from the warehouse. When the slope is negative (segment falls from left to right), the truck is moving toward the warehouse. And when the slope is 0 (segment is horizontal), the truck is not moving.**

# Guided Notes Worksheet





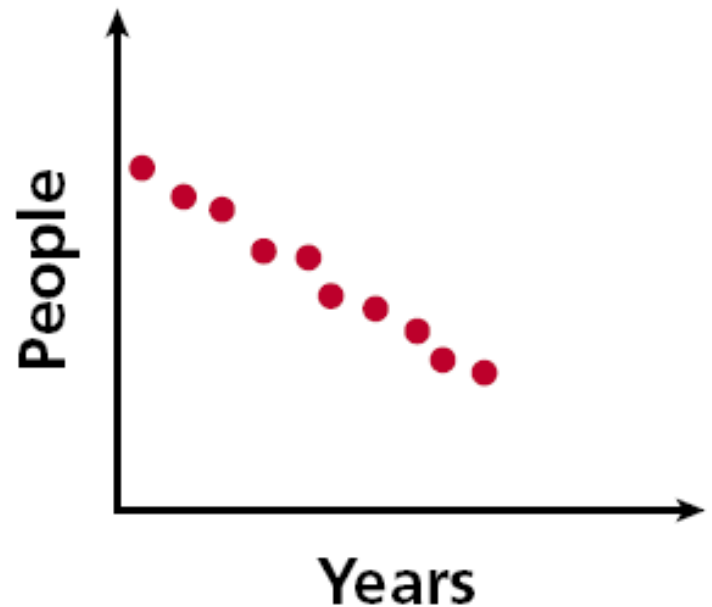
Some graphs are connected lines or curves called **continuous graphs**. Some graphs are only distinct points. They are called **discrete graphs**



# WHY IS THIS A DISCRETE GRAPH?

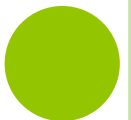
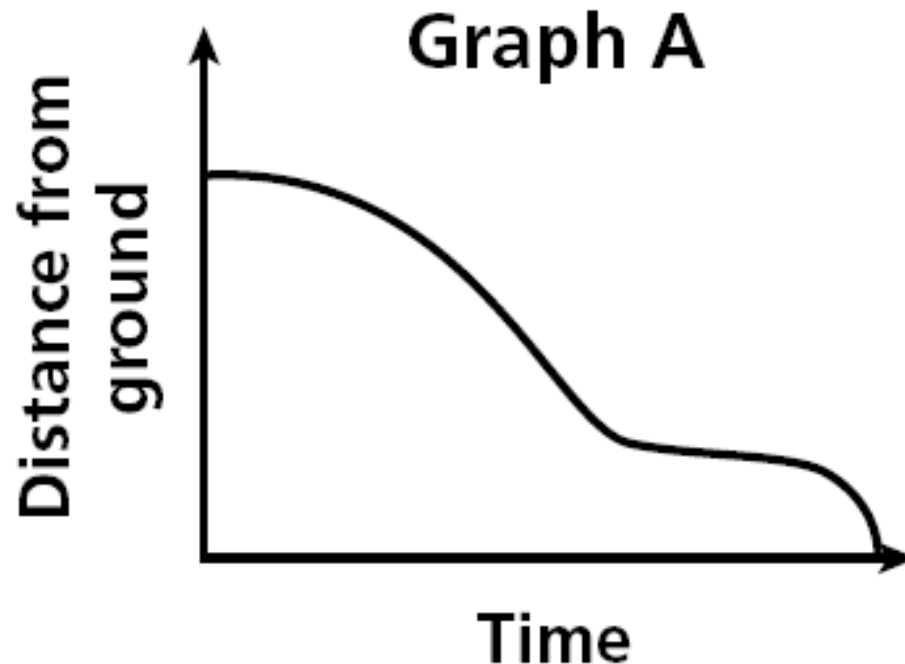
The graph on theme park attendance is an example of a discrete graph. It consists of distinct points because each year is distinct and people are counted in whole numbers only. The values between whole numbers are not included, since they have no meaning for the situation.

**Theme Park Attendance**



# WHY IS THIS A CONTINUOUS GRAPH?

The graph models the situation of a child going down a slide. Graph A represents the child's *distance from the ground* related to time.



**For each situation,**

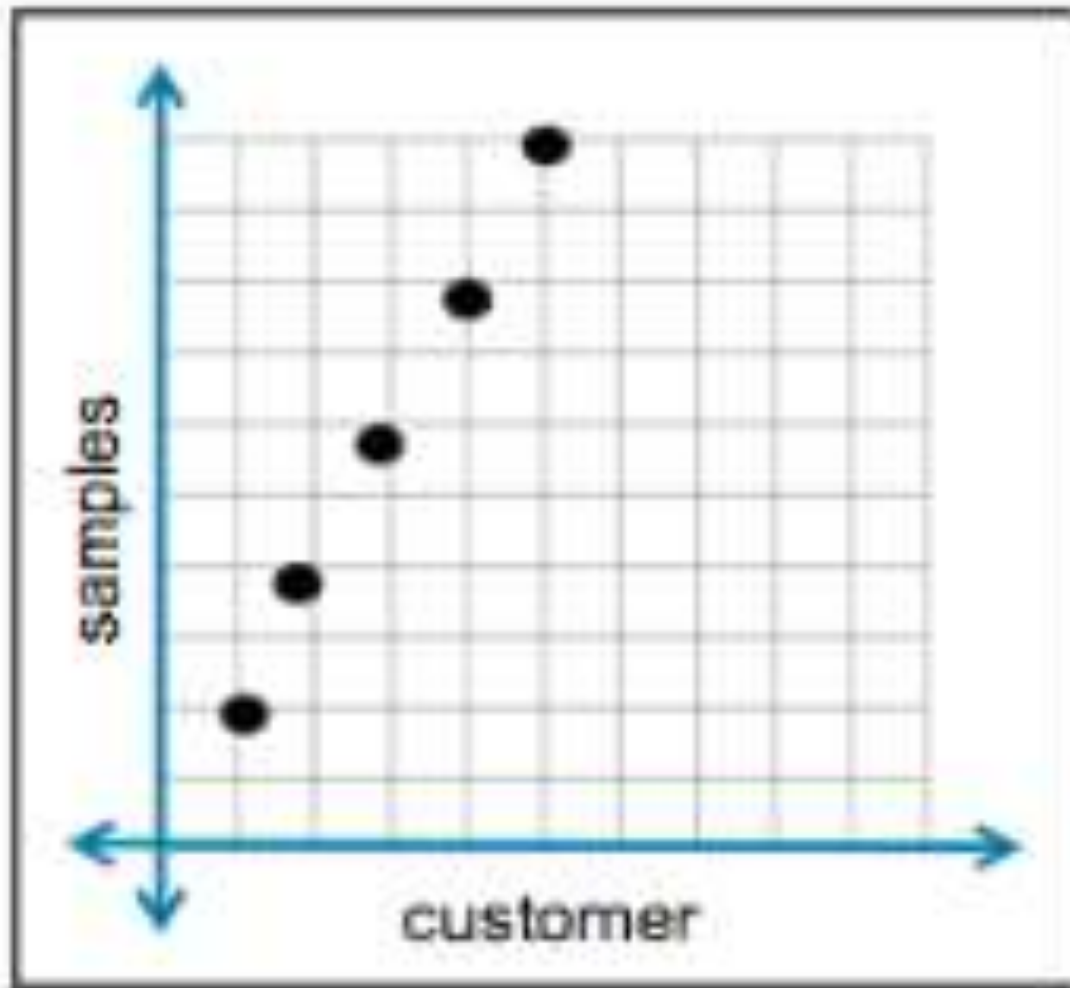
- A.** Decide what you think the variables would be on the x and y-axis for the graph.
- B.** Then say whether the graph would be continuous or discrete.

**1) Each customer who enters a store gets 2 free samples of chocolate.**

**2) A gardener records the age of a tree and its height.**

**3) Tickets to a concert cost \$30 each.**



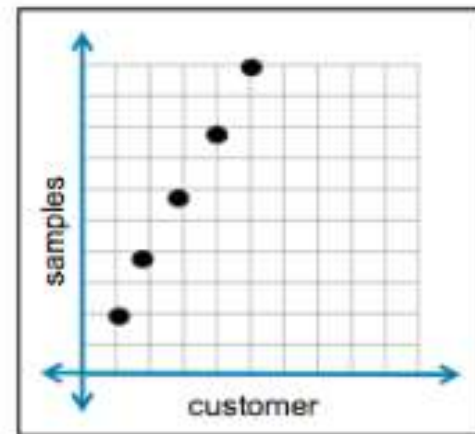


- 1) Each customer who enters a store gets 2 free samples of chocolate.

x-axis: # of customers,

y-axis: total # of samples given out

Discrete (fractions don't make sense)



- 2) A gardener records the age of a tree and its height.

x-axis: age of the tree

y-axis: height of the tree

Continuous (fractions would make sense)

- 3) Tickets to a concert cost \$30 each.

x-axis: # of tickets bought

y-axis: total cost

Discrete (can't buy part of a ticket)

