

Interpreting Graphs

You can interpret graphs of relations and functions by analyzing their shape.

Example Analyze Graphs

Describe what is happening in the graph. Then create a situation that corresponds to the graph.

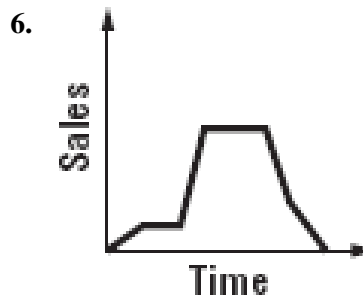
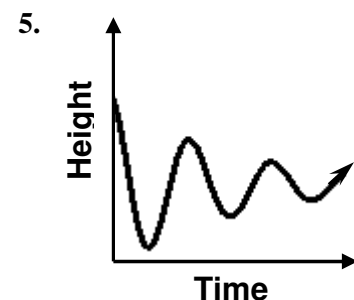
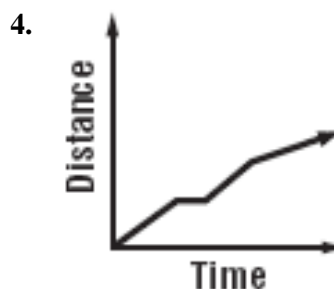
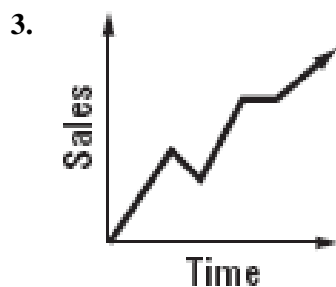
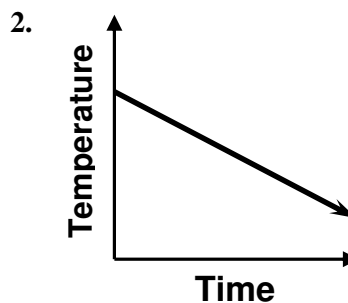
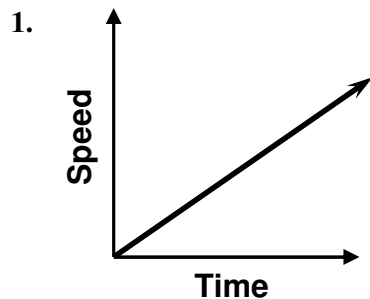
As you look at the graph from left to right, you can see that as time increases, the distance traveled increases, remains constant for a period of time, and then continues to increase.

One situation that corresponds to this graph could be the distance that a cyclist has ridden on a bike. The cyclist is riding, stops to rest, and then continues to ride.



Exercises

Describe what is happening in each graph. Then create a situation that corresponds to the graph.



Interpreting Graphs

Answers

1. Sample answer: As time increases, speed increases at a constant rate. This graph could represent the change in the speed of a car that is accelerating at a constant rate.
2. Sample answer: As time increases, temperature decreases. This graph could represent the change in the outside air temperature over a short interval of time, where the temperature is dropping at a constant rate.
3. Sample answer: As time increases, sales increase, decrease, increase, remain constant, and then increase again. This graph could represent the change in sales revenue generated through an online store over time.
4. Sample answer: As time increases, distance increases at a constant rate, remains constant for a time, then increases again at about the same rate, and then continues to increase at a slower rate. This graph could represent an afternoon walk where a person walked at a steady speed for a time, stopped to talk to someone for a time, started walking again at about the same rate of speed, and then walked a little more slowly near the end of his or her walk.
5. Sample answer: As time increases, the height of an object decreases to a height near zero, remains nearly constant briefly, then increases to height that is less than the height at which it began, remains nearly constant briefly, decreases to a height that is greater than the low it reached previously, remains nearly constant briefly, increases to a height that is less than the high it reached previously, remains nearly constant briefly, decreases to a height that is greater than the low it reached previously, remains nearly constant briefly, and then increases. This graph could represent the position of a bungee jumper over time.
6. Sample answer: As time increases, sales increase, remain constant for a period of time, increase, remain constant for a period of time, decrease, and then decrease at a slower rate. This graph could represent the sales of lawn mowers over one year.