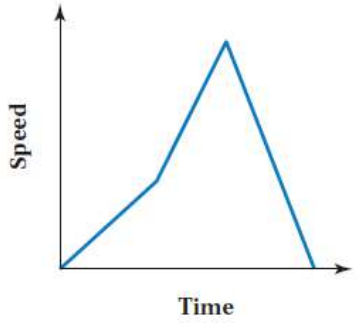
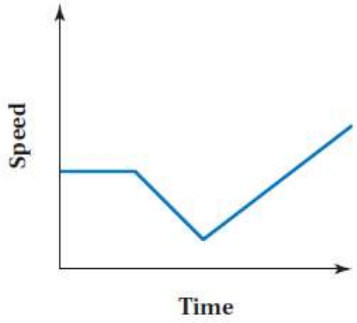
Matching Situations to Graphs

Each graph shows your speed during a bike ride.
Match each situation with its graph.

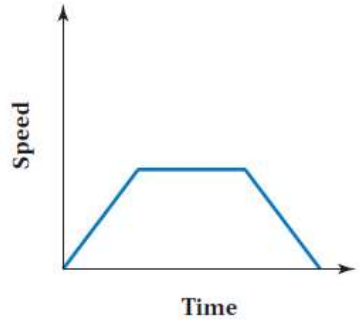
A.



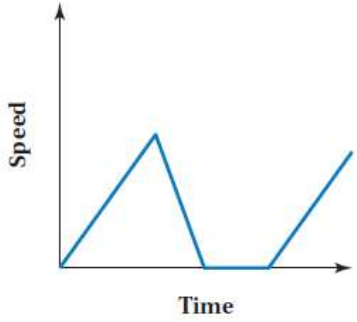
B.



C.



D.



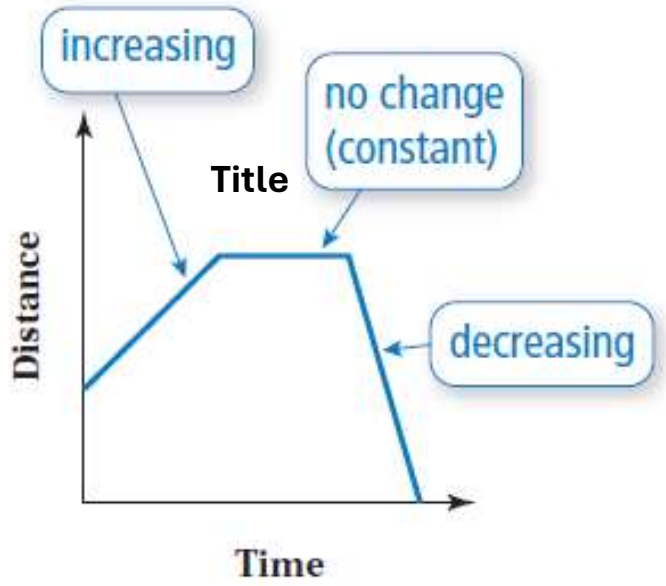
a. You increase your speed, then ride at a constant speed along a bike path. You then slow down until you reach your friend's house.

b. You increase your speed, then go down a hill. You then quickly come to a stop at an intersection.

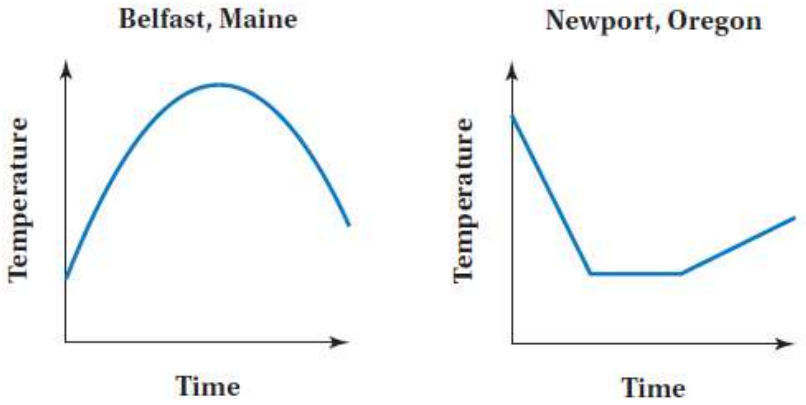
c. You increase your speed, then stop at a store for a couple of minutes. You then continue to ride, increasing your speed.

d. You ride at a constant speed, then go up a hill. Once on top of the hill, you increase your speed.

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



The graphs show the temperatures throughout the day in two cities.



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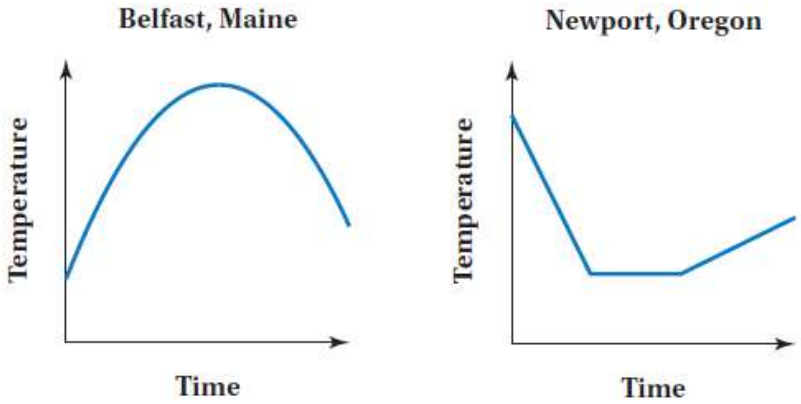

a. Describe the change in temperature in each city.

Belfast: The temperature increases at the beginning of the day. The rate of increase slows until the temperature begins to decrease. Then the temperature decreases at a faster and faster rate for the rest of the day.

Newport: The temperature decreases at a constant rate at the beginning of the day. Then the temperature stays the same for a while before increasing at a constant rate for the rest of the day.

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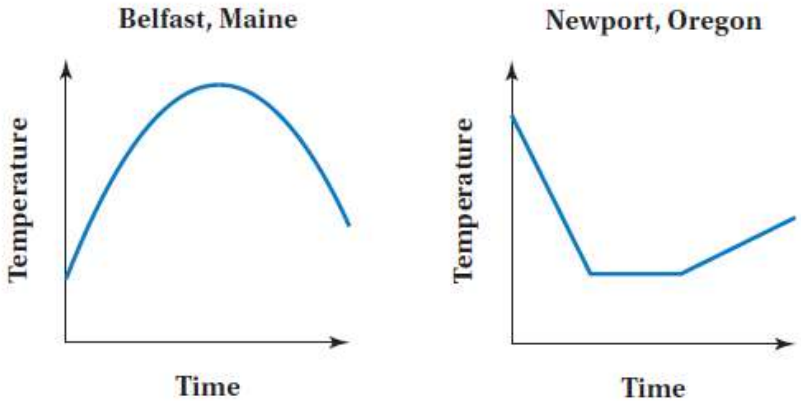

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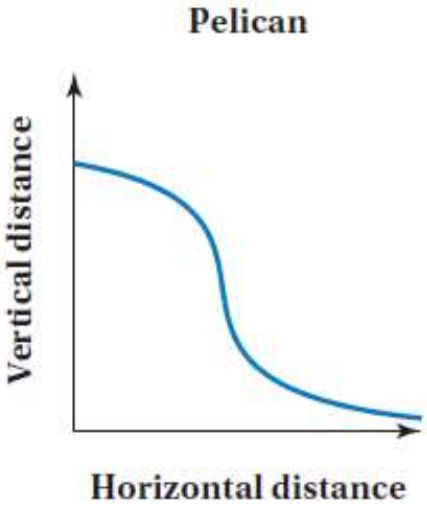
b. Write an explanation for the decrease in temperature and the increase in temperature in Newport, Oregon.

A storm moves through the city in the morning, causing the temperature to drop. When the storm ends, the temperature increases at a constant rate.



Try It

1. The graph shows the location of a pelican relative to your location.
   a. Describe the path of the pelican.
   b. Write an explanation for the decrease in the vertical distance of the pelican.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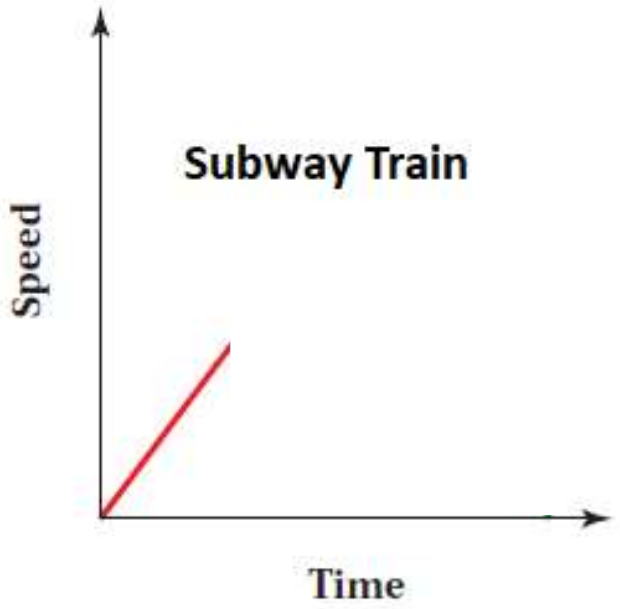
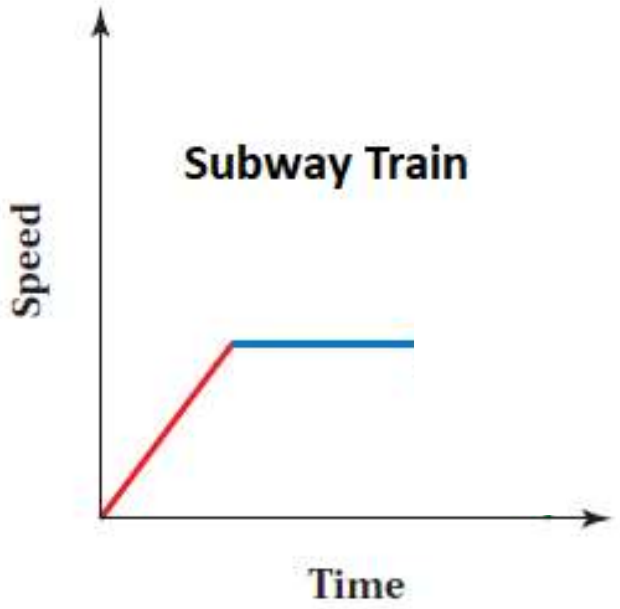
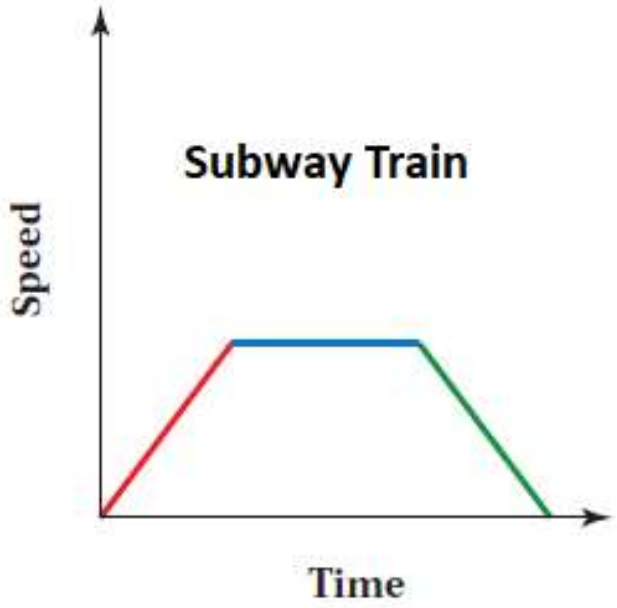
A stopped subway train gains speed at a constant rate until it reaches its maximum speed.



A stopped subway train gains speed at a constant rate until it reaches its maximum speed. It travels at this speed for a while



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. Sketch a graph that represents this situation.



Try It

2. A fully-charged battery loses its charge at a constant rate until it has no charge left. You plug it in, and it fully recharges at a constant rate. Then it loses its charge at a constant rate until it has no charge left. Sketch a graph that represents this situation.