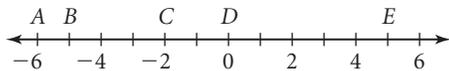


# Lesson 7.3 • Graphs of Real-World Situations

Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

- For each relationship, identify the independent variable and the dependent variable. Then sketch a reasonable graph for each situation and label the axes. Write a few sentences explaining each graph. In your explanations, use terms such as *linear*, *nonlinear*, *continuous*, *discrete*, *increasing*, and *decreasing*.
  - The temperature of a carton of milk and the length of time it has been out of the refrigerator
  - The number of cars on the freeway and the level of exhaust fumes in the air
  - The temperature of a pot of water as it is heated
  - The relationship between the cooking time for a 2-pound roast and the temperature of the oven
  - The distance from a Ferris-wheel rider to the ground during two revolutions
- Sketch a graph of a continuous function to fit each description.
  - Linear and increasing, then linear and decreasing
  - Neither increasing nor decreasing
  - Increasing with a slower and slower rate of change
  - Decreasing with a slower and slower rate of change, then increasing with a faster and faster rate of change
  - Increasing with a slower and slower rate of change, then increasing with a faster and faster rate of change
- Write an inequality for each interval in 3a–f. Include the least point in each interval and exclude the greatest point in each interval.



- |               |               |               |
|---------------|---------------|---------------|
| a. $A$ to $B$ | b. $B$ to $D$ | c. $A$ to $C$ |
| d. $B$ to $E$ | e. $C$ to $E$ | f. $C$ to $D$ |

- Describe each of these discrete function graphs using the words *increasing*, *decreasing*, *linear*, *nonlinear*, and *rate of change*.

