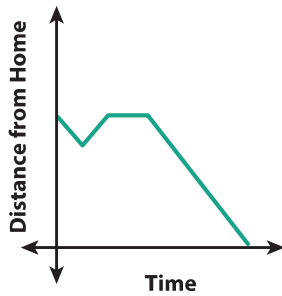Name: _____

Graphs of Functional Relationships

Solve the problems.

**1** The graph represents Sophia's distance from home.

Make sure that you think about the details in each description and where the graph starts: home or work.

Which one of these situations matches the graph?

A Sophia starts driving home, stops on the way to pick up a friend, and then continues driving home.

B On the way home from work, Sophia makes two stops at different stores, staying in each store for a few minutes, and then drives home.

C Sophia starts driving home, realizes that she forgot her cell phone at work, drives back to work for her phone, and then drives home.

D Sophia walks to the bus stop, waits for the bus, then takes the bus home.

2 The battery life for Jacob's laptop decreases as he uses it while unplugged until it finally dies. It takes Jacob a while to find a place to charge the battery. When he finally plugs it in, the battery charges and gains more battery life. Sketch a graph to represent the situation.
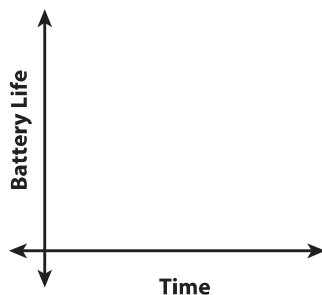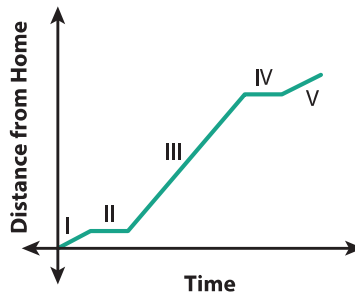
When will the graph be increasing or decreasing? When will it be neither?

Solve.

3 Mica takes a train to visit a friend. The graph shows Mica's trip from his home in New Jersey to his friend's house in Maine.

Which part of the graph shows Mica's wait at the train station in New Jersey?

A I

B II

C IV

D V
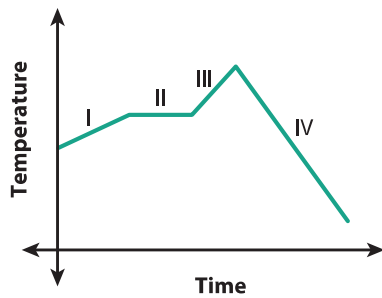
In which state did Mica start his trip?

Shakira chose **C** as the correct answer. How did she get that answer?

_____

_____

4 This graph shows the temperature for a day in a city. Tell whether each statement is *True* or *False*.

Compare each description to its corresponding section of the graph.

a. Section I: The temperature increases for a few hours. ☐ True ☐ False

b. Section II: The temperature decreases for few hours. ☐ True ☐ False

c. Section III: The temperature stays the same for a few hours. ☐ True ☐ False

d. Section IV: The temperature decreases from the high for the day until the end of the day. ☐ True ☐ False