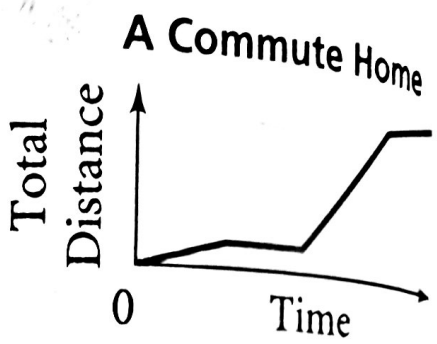
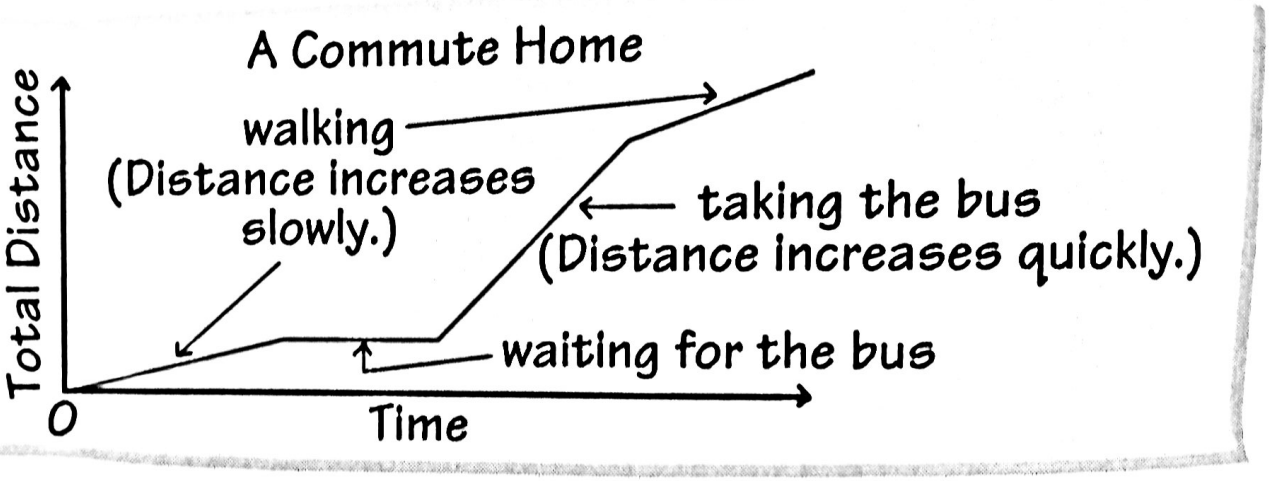
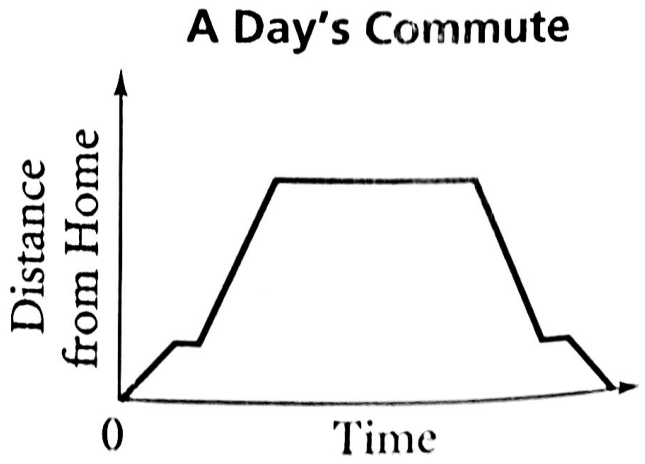
**Commute** One student walks and takes a bus to get from school to home each day. The graph at the right shows the student's commute by relating the time the student spends commuting and the distance he travels.

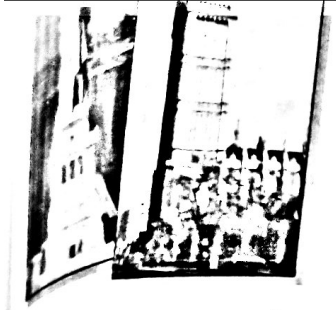



Describe what the graph shows by labeling each part.




**0** The graph at the right shows a trip from home to school and back. The trip involves walking and getting a ride from a neighbor. Copy the graph and label each section. **See back of book.**



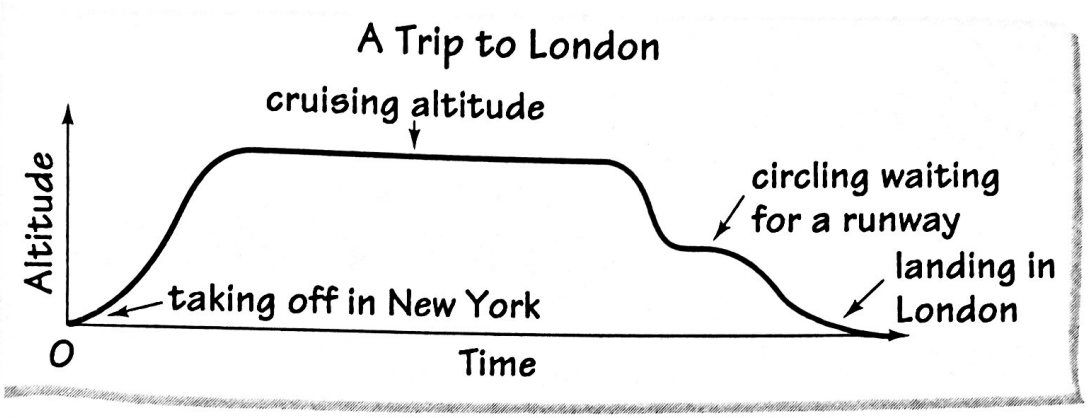


**Real-World Connection**

The Statue of Liberty, in New York harbor, is 151 ft from base to torch. The clock tower, which is part of the Houses of Parliament in London, is 320 ft tall.

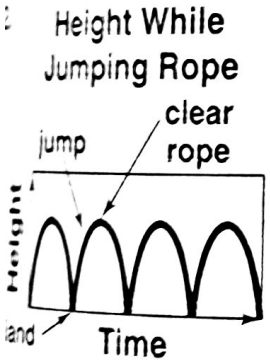
## 2 EXAMPLE Sketching a Graph

**Travel** A plane is flying from New York to London. Sketch a graph of the plane's altitude during the flight. Label each section.




**Check Understanding**

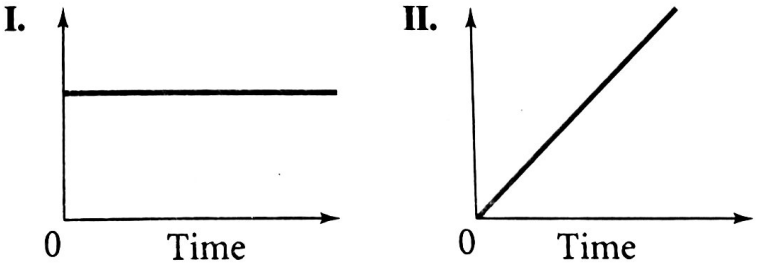
**2** Sketch a graph of the distance from a child's feet to the ground as the child jumps rope. Label each section. **See left.**




Most of the graphs in this lesson do not have numbers along the axes. You can analyze a graph based on the shape of the graph alone.

## 3 EXAMPLE Analyzing Graphs

A car travels at a steady speed. Which graph could you use to show the speed of the car, and which could you use to show the distance it has traveled? Explain.




Graph I indicates a quantity that does not change with time. You could use it to indicate a car going at a steady speed. Graph II shows an increase over time. You could use it to indicate the distance a car travels at a steady speed over a given amount of time.

**Check Understanding**

**3** Suppose water is poured into each container below at a steady rate. Match each

## Check Understanding

3. A. III

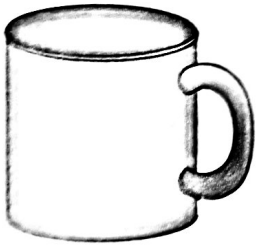
   B. I

   C. II

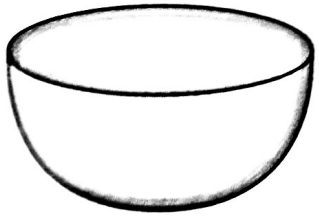
   The height of the water in A will increase at a steady rate. The rate that the water rises in B will decrease steadily because it gets wider from the bottom to the top. The rate that the water rises in C will decrease as it gets wider and then increase as it gets narrower towards the top.

**3** Suppose you pour water into each container below at a steady rate. Match each container with the graph that shows the change in the height of the liquid in the container over time. Explain your choices. **See left.**

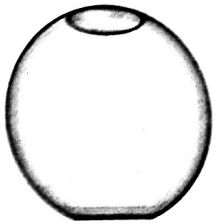
**A.**



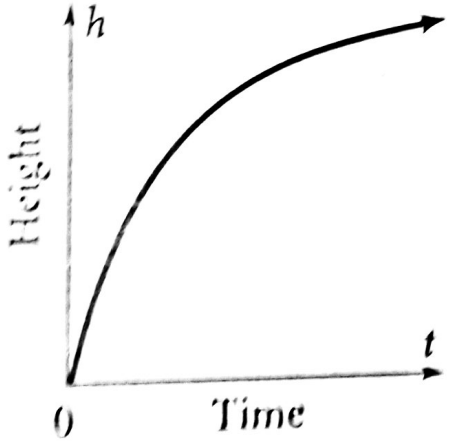
**B.**



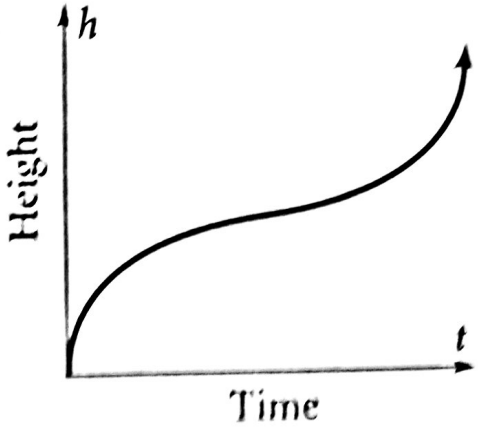
**C.**



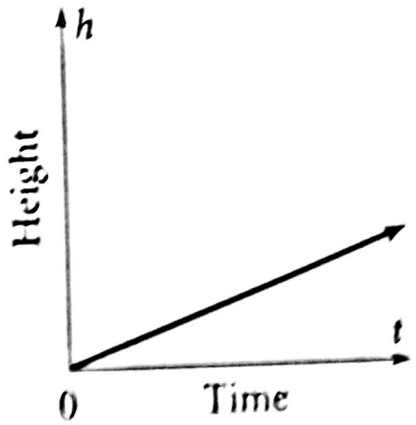
**I.**




**II.**

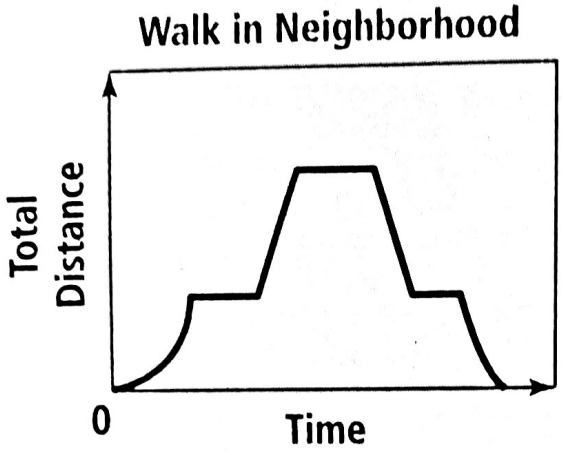


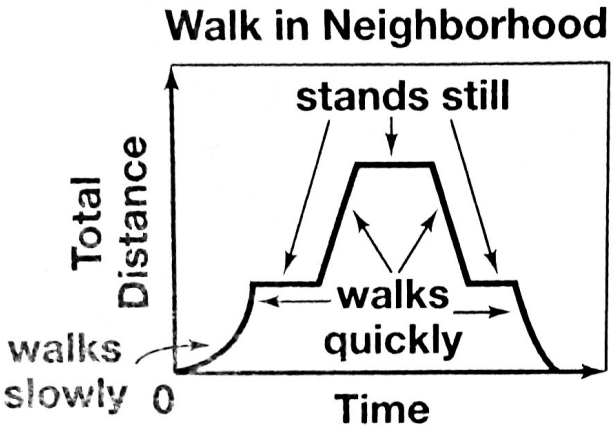

**III.**



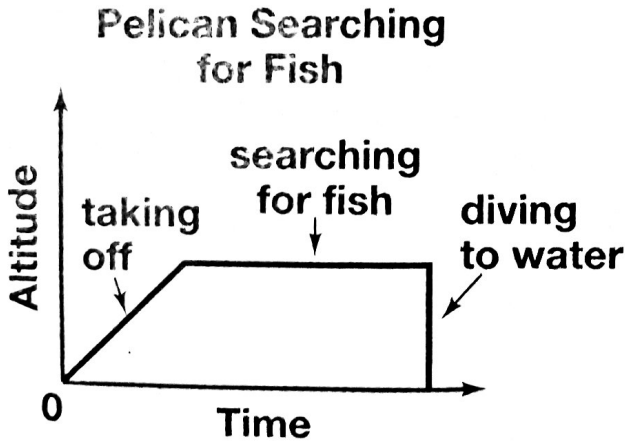
## Additional Examples

**1** Describe what this graph shows by labeling each part.




**2** Sketch a graph of the altitude of a pelican, from take off from shore to diving to the water to catch a fish. Label each section.




**3** Describe the graph of a car that is parked. **The graph would be a horizontal line on the horizontal axis.**

## Closure