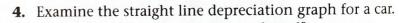
Applications

If the automobile had followed the same development cycle as the computer, a Rolls-Royce would today cost \$100 [and] get a million miles per gallon.

Michael Moncur, Internet Consultant

- 1. How might those words apply to what you have learned?
- 2. Delia purchased a new car for \$25,350. This make and model straight line depreciates to zero after 13 years.
 - **a.** Identify the coordinates of the *x* and *y*-intercepts for the depreciation equation.
 - **b.** Determine the slope of the depreciation equation.
 - c. Write the straight line depreciation equation that models this situation.
 - **d.** Draw the graph of the straight line depreciation equation.
- 3. Vince purchased a used car for \$11,200. This make and model used car straight line depreciates to zero after 7 years.
 - **a.** Identify the coordinates of the *x* and *y*-intercepts for the depreciation equation.
 - **b.** Determine the slope of the depreciation equation.
 - c. Write the straight line depreciation equation that models this situation.
 - **d.** Draw the graph of the straight line depreciation equation.



- **a.** At what price was the car purchased? **b.** After how many years does the car totally depreciate?
- c. Write the equation of the straight line depreciation graph shown.
- 5. The straight line depreciation equation for a luxury car is y = -3.400x + 85.000.
 - a. What is the original price of the car?
 - **b.** How much value does the car lose per year?
 - c. How many years will it take for the car to totally depreciate?
- 6. The straight line depreciation equation for a motorcycle is y = -2,150x + 17,200.
 - **a.** What is the original price of the motorcycle?
 - **b.** How much value does the motorcycle lose per year?
 - c. How many years will it take for the motorcycle to totally depreciate?
- 7. The straight line depreciation equation for a car is y = -2,750x + 22,000.
 - **a.** What is the car worth after 5 years?
 - **b.** What is the car worth after 8 years?
 - **c.** Suppose that A represents a length of time in years when the car still has value. Write an algebraic expression to represent the value of the car after A years.

