

Notes 7.2 Linear Functions and Their Graphs

1. Graph: $2x + 3y = 6$ using intercepts to graph a linear equation
2. Find the slope of the line passing through each pair of points:
 - a. $(-3, 4)$ and $(-4, -2)$
 - b. $(4, -2)$ and $(-1, 5)$
3. Graph the linear function $y = \frac{3}{5}x + 1$ by using the slope and y-intercept.
4. Graph the linear function $3x + 4y = 0$ by using the slope and y-intercept.
5. Graph $y = 3$ in the rectangular coordinate system.
6. Graph $x = -2$ in the rectangular coordinate system.

7. Slope as a Rate of Change

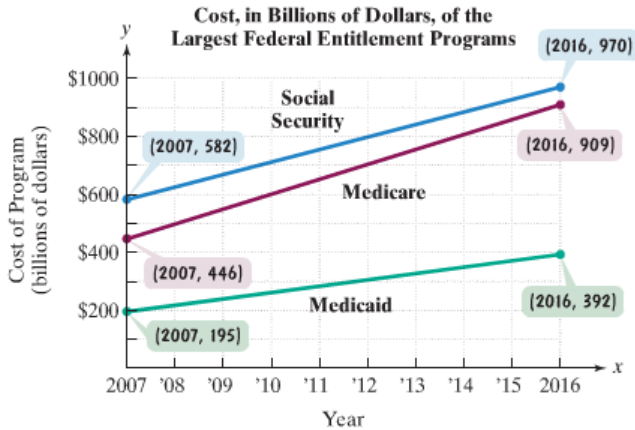


FIGURE 7.25

Source: Congressional Budget Office

Find the slope of the line segment representing Medicare in Figure 7.25. Round to one decimal place. Describe what the slope represents.

8. Modeling with the Slope-Intercept Equation

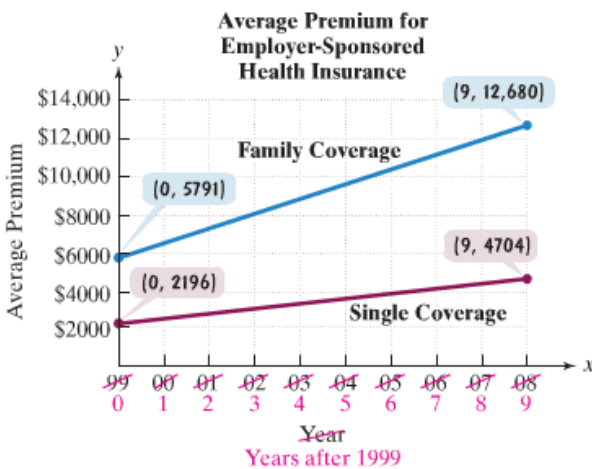


FIGURE 7.26

- Use the two points for family coverage in Figure 7.26 to find a function in the form $F(x) = mx + b$ that models the average premium, $F(x)$, for family coverage x years after 1999. Round m to the nearest dollar.
- Use the model to project the average premium for family coverage in 2011.