Sec. 9.2: p. 383 (#8-11)

8. $y = -9.6x + 883$; $r \approx -0.96$; The relationship between x and y is a strong negative correlation and the equation closely models the data.

9. $y = 0.9x + 4$; $r \approx 0.999$; The relationship between x and y is a strong positive correlation and the equation closely models the data; 4 in.

10. a. approx. $y = -2{,}811.5 + 454.8x$
The correlation coefficient is 454.8, which means that each year, the number of text messages increased by *approximately* 454.8.

b. The slope of the line shows a steady annual increase in the number of text messages. The y-intercept does not make sense for this problem, because it gives the impression that there were -2,811.5 billion text messages during the year 2000, which would be impossible. This could have been avoided by using the year 2006 as Year 0 for the table and graph.

c. about 4,010.5 billion

11. a. $y = 48x + 11$; $r \approx 0.98$; The relationship between x and y is a strong positive correlation and the equation closely models the data.

b. 251 feet

c. The height of a hit baseball is not linear. The best fit line from part (a) only models a small part of the data.