Algebra 2 Honors
Section 6-1 p.389

Name Key

7. 228.95 taken either way

8.
a. $(f+g)(x)$
$-2x+5$

b. $(f-g)(x)$
$6x-5$

c. $(f \cdot g)(x)$
$-8x^2+10x$

d. $\left(\frac{f}{g}\right)(x)$ $\frac{2x}{-4x+5}$; $x \neq \frac{5}{4}$

13.
a. $(f+g)(x)$
x^2+x-5

b. $(f-g)(x)$
x^2-x+5

c. $(f \cdot g)(x)$
x^3-5x^2

d. $\left(\frac{f}{g}\right)(x)$ $\frac{x^2}{x-5}$; $x \neq 5$

16.
a. $375-x+10$

b. $25-x+40$

21.
a. $f \circ g$ undefined $D=\emptyset$ $R=\emptyset$

b. $g \circ f$
$\{(-4,0),(1,2)\}$ $D=\{-4,1\}$ $R=\{0,2\}$

22.
a. $f \circ g$ $\{(-1,-2)\}$ $D=\{-1\}$ $R=\{-2\}$

b. $g \circ f$ undefined $D=\emptyset$ $R=\emptyset$

25.
a. $f \circ g$ $\{(3,-1),(6,11)\}$ $D=\{3,6\}$ $R=\{-1,11\}$

b. $g \circ f$ $\{(-4,5),(-2,4),(-1,8)\}$
$D=\{-4,-2,-1\}$
$R=\{4,5,8\}$

27.
$[f \circ g](x) = 2x+10$ $D=\{\mathbb{R}\}$ $R=\{\mathbb{R}\}$

$[g \circ f](x) = 2x+5$ $D=\{\mathbb{R}\}$ $R=\{\mathbb{R}\}$

28.
$[f \circ g](x) = 3x-24$ $D=\{\mathbb{R}\}$ $R=\{\mathbb{R}\}$

$[g \circ f](x) = 3x+8$ $D=\{\mathbb{R}\}$ $R=\{\mathbb{R}\}$

29. $[f \circ g](x) = 3x - 2$ $D = \{\mathbb{R}\}$ $R = \{\mathbb{R}\}$

$[g \circ f](x) = 3x + 8$ $D = \{\mathbb{R}\}$ $R = \{\mathbb{R}\}$

30. $[f \circ g](x) = x^2 - 14$ $D = \{\mathbb{R}\}$ $R = \{y \mid y \geq -14\}$

$[g \circ f](x) = x^2 - 8x + 6$ $D = \{\mathbb{R}\}$ $R = \{y \mid y \geq -10\}$

36. Profit = Revenue – Cost

a. $P(x) = 5.75x - 1850$

b. Explain at least 2 different ways you could find these three values on your calculator once you have the profit function in part a.

① use the table after you graph (after you adjust your window)
② evaluate ③ use tables in Stat * ask me!

41. 25

43. 483

45. -5

47. $-30a + 5$