Answer Key · Lesson 1.4: Combining and Composing Functions

School Launch · Algebra II · Unit 1 · Worksheet A · for the parent

Key

1. $9;\ -90$

$f(x) = 3 - 4x,\ g(x) = 2x$. Find $(f+g)(-3)$ and $(fg)(-3)$.

2. $1;\ 0$

$f(x) = 1 - x,\ g(x) = -3x$. Find $(f+g)(0)$ and $(fg)(0)$.

3. $16;\ 60$

$f(x) = 4 - 3x,\ g(x) = -3x$. Find $(f+g)(-2)$ and $(fg)(-2)$.

4. $7 - x^2;\ x^2 - 10x + 23;\ 6$

1. $f(g(x)) = f(x^2 - 2) = 7 - x^2$
2. $g(f(x)) = g(5 - x) = x^2 - 10x + 23$
3. $g(1) = -1,\ f(-1) = 6$

$f(x) = 5 - x$ and $g(x) = x^2 - 2$. Find $f(g(x))$, $g(f(x))$ and $f(g(1))$.

5. $2x^2 + 7;\ 4x^2 + 4x + 4;\ 25$

1. $f(g(x)) = f(x^2 + 3) = 2x^2 + 7$
2. $g(f(x)) = g(2x + 1) = 4x^2 + 4x + 4$
3. $g(-3) = 12,\ f(12) = 25$

$f(x) = 2x + 1$ and $g(x) = x^2 + 3$. Find $f(g(x))$, $g(f(x))$ and $f(g(-3))$.

6. $2x^2 - 5;\ 4x^2 + 4x - 2;\ -3$

1. $f(g(x)) = f(x^2 - 3) = 2x^2 - 5$
2. $g(f(x)) = g(2x + 1) = 4x^2 + 4x - 2$
3. $g(-1) = -2,\ f(-2) = -3$

$f(x) = 2x + 1$ and $g(x) = x^2 - 3$. Find $f(g(x))$, $g(f(x))$ and $f(g(-1))$.

7. $x^2 + 2;\ x^2 + 2;\ 6$

1. $f(g(x)) = f(x^2 + 2) = x^2 + 2$
2. $g(f(x)) = g(x) = x^2 + 2$
3. $g(-2) = 6,\ f(6) = 6$

$f(x) = x$ and $g(x) = x^2 + 2$. Find $f(g(x))$, $g(f(x))$ and $f(g(-2))$.

8. $2x^2;\ 4x^2 - 16x + 18;\ 8$

1. $f(g(x)) = f(x^2 + 2) = 2x^2$
2. $g(f(x)) = g(2x - 4) = 4x^2 - 16x + 18$
3. $g(-2) = 6,\ f(6) = 8$

$f(x) = 2x - 4$ and $g(x) = x^2 + 2$. Find $f(g(x))$, $g(f(x))$ and $f(g(-2))$.

9. $4 - 4x^2;\ 16x^2 + 32x + 14;\ -32$

1. $f(g(x)) = f(x^2 - 2) = 4 - 4x^2$
2. $g(f(x)) = g(-4x - 4) = 16x^2 + 32x + 14$
3. $g(3) = 7,\ f(7) = -32$

$f(x) = -4x - 4$ and $g(x) = x^2 - 2$. Find $f(g(x))$, $g(f(x))$ and $f(g(3))$.

10. $11 - 2x^2;\ 4x^2 - 20x + 22;\ 3$

1. $f(g(x)) = f(x^2 - 3) = 11 - 2x^2$
2. $g(f(x)) = g(5 - 2x) = 4x^2 - 20x + 22$
3. $g(2) = 1,\ f(1) = 3$

$f(x) = 5 - 2x$ and $g(x) = x^2 - 3$. Find $f(g(x))$, $g(f(x))$ and $f(g(2))$.