Name: _____ Date: _____

Fresh Math

Modeling Function Combination - Medium

Find the indicated product or value.

1. $f(x) = x - 3,\ g(x) = -2x - 9$
   $f(g(0))$

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

3. $f(x) = 4x + 9,\ g(x) = x - 1$
   $(f \cdot g)(x)$

4. $f(x) = 5x + 5,\ g(x) = -4x - 6$
   $(f + g)(2)$

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

6. $f(x) = 3x + 8,\ g(x) = 2x^2 + 6x + 6$
   $(f \cdot g)(x)$

7. $f(x) = x - 2,\ g(x) = 2x - 8$
   $(f + g)(4)$

8. $f(x) = 6x + 4,\ g(x) = x + 8$
   $(f \cdot g)(x)$

9. $f(x) = -5x - 3,\ g(x) = -x^2 + 7$
   $(f \cdot g)(x)$

10. $f(x) = -6x - 7,\ g(x) = -4x - 4$
    $(f + g)(-4)$

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Fresh Math

Modeling Function Combination - Medium

Find the indicated product or value.

11. $f(x) = -4x - 2$, $g(x) = -4x - 8$
    $(f + g)(-3)$

12. $f(x) = 3x - 1$, $g(x) = 2x^2 + 4x + 9$
    $(f + g)(2)$

13. $f(x) = -3x + 4$, $g(x) = -3x - 5$
    $(f \cdot g)(x)$

14. $f(x) = x + 5$, $g(x) = 2x + 9$
    $(f \cdot g)(x)$

15. $f(x) = -6x + 3$, $g(x) = 2x^2 + 6x - 7$
    $(f + g)(-3)$

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

17. $f(x) = 6x - 9$, $g(x) = 2x - 1$
    $f(g(0))$

18. $f(x) = -3x - 7$, $g(x) = x^2 - 6x - 3$
    $f(g(0))$

19. $f(x) = -3x + 7$, $g(x) = 2x - 4$
    $f(g(-2))$

20. $f(x) = -3x + 4$, $g(x) = 4x + 1$
    $(f \cdot g)(x)$

Modeling Function Combination - Medium - Answer Key

1. $f(x) = x - 3,\ g(x) = -2x - 9$
   $f(g(0))$
   -12

2. $f(x) = -6x + 7,\ g(x) = -3x + 6$
   $f(g(-1))$
   -47

3. $f(x) = 4x + 9,\ g(x) = x - 1$
   $(f \cdot g)(x)$
   $4x^2 + 5x - 9$

4. $f(x) = 5x + 5,\ g(x) = -4x - 6$
   $(f + g)(2)$
   1

5. $f(x) = -3x + 5,\ g(x) = 3x^2 - 4x + 4$
   $f(g(-1))$
   -28

6. $f(x) = 3x + 8,\ g(x) = 2x^2 + 6x + 6$
   $(f \cdot g)(x)$
   $6x^3 + 34x^2 + 66x + 48$

7. $f(x) = x - 2,\ g(x) = 2x - 8$
   $(f + g)(4)$
   2

8. $f(x) = 6x + 4,\ g(x) = x + 8$
   $(f \cdot g)(x)$
   $6x^2 + 52x + 32$

9. $f(x) = -5x - 3,\ g(x) = -x^2 + 7$
   $(f \cdot g)(x)$
   $5x^3 + 3x^2 - 35x - 21$

10. $f(x) = -6x - 7,\ g(x) = -4x - 4$
    $(f + g)(-4)$
    29

Modeling Function Combination - Medium - Answer Key

11. $f(x) = -4x - 2$, $g(x) = -4x - 8$
    $(f + g)(-3)$
    14

12. $f(x) = 3x - 1$, $g(x) = 2x^2 + 4x + 9$
    $(f + g)(2)$
    30

13. $f(x) = -3x + 4$, $g(x) = -3x - 5$
    $(f \cdot g)(x)$
    $9x^2 + 3x - 20$

14. $f(x) = x + 5$, $g(x) = 2x + 9$
    $(f \cdot g)(x)$
    $2x^2 + 19x + 45$

15. $f(x) = -6x + 3$, $g(x) = 2x^2 + 6x - 7$
    $(f + g)(-3)$
    14

16. $f(x) = -2x - 1$, $g(x) = 3x^2 + 4x - 3$
    $f(g(-4))$
    -59

17. $f(x) = 6x - 9$, $g(x) = 2x - 1$
    $f(g(0))$
    -15

18. $f(x) = -3x - 7$, $g(x) = x^2 - 6x - 3$
    $f(g(0))$
    2

19. $f(x) = -3x + 7$, $g(x) = 2x - 4$
    $f(g(-2))$
    31

20. $f(x) = -3x + 4$, $g(x) = 4x + 1$
    $(f \cdot g)(x)$
    $-12x^2 + 13x + 4$