

Math 2

Name _____

Unit Zero Review

Per _____ Date _____

1. Given the function, $f(x) = -3x - 7$, find:

a. $f(2)$

b. $f(-5)$

c. $f(-1)$

2. Given the function, $g(x) = x^2 - 4x + 2$, find:

a. $g(3)$

b. $g(-2)$

c. $g(5)$

3. Using the functions from problems 1 and 2 find the following:

a. $f(3) + g(1)$
 $-16 + (-1) = -17$

b. $g(6) - f(-2)$

$f(3) = -3(3) - 7$
 $-9 - 7$
 -16

$g(1) = 1^2 - 4(1) + 2$
 $1 - 4 + 2$
 -1

$g(6) = 6^2 - 4(6) + 2$
 $36 - 24 + 2$
 14

$f(-2) = -3(-2) - 7$
 $= 6 - 7$
 -1

4. Solve of each equation.

a. $m - 30 = 6 - 2m$

b. $2(x + 6) = -2(x - 4)$
 $14 - (-1) = 15$

c. $4(-3x + 1) = -10(x - 4) - 14x$

d. $\frac{x}{5} + 3 = 6$

$\frac{3x+5}{2} = (10)2$

$3x + 5 = 20$
 $-5 -5$

$\frac{3x}{3} = \frac{15}{3}$

$x = 5$

5. Simplify the following expression. If possible write the expanded form in factored form. Make sure all answers are in standard form.

a. $7x^2 + 12x - 40x - x^2$

$$6x^2 - 28x.$$

$$2x(3x - 14).$$

b. $x - 6x^2 - 3x + 4x^2$

c. $12(n - 3) + 4(n - 13)$

d. $4(x + 2x) - 2(x^2 - x)$

6. Simplify using the order of operations

a. $16 \div 8 \cdot 2^2$

b. $6(5 - 3)^2 + 3$

c. $10 \div 2 + 3 + 9$

d. $5 + 8 \cdot 2 - 4$

e. $\frac{3^2 - 3}{2 \cdot 9}$

f. $[10 + (5^2 \cdot 2)] \div 6$

$$[10 + (25 \cdot 2)] \div 6$$

$$[10 + 50] \div 6$$

$$60 \div 6$$

7. Find the product

a. $(2x - 5)(3x - 4)$

b. $(5x - 3)(x + 7)$

c. $(4x - 1)^2$

c. $(2x + 5)(2x - 5)$

d) $(x - 3)(x^2 - 3x - 2)$

d. $(x - 3)(x - 5)(2x + 1)$