

Name: _____

Unit 1: Equations & Inequalities

Date: _____ Bell: _____

Homework 2: Expressions & Operations



**** This is a 2-page document! ****

Directions: Simplify each expression.

1. $25 - (\sqrt{16} - 1) \cdot (3 - 9)^2$

2. $|5 - 2(9)| + 9^2 \div 3$

3. $\frac{2^5 - 4 \cdot 3^3}{7 + (1 - \sqrt{100})}$

4. $\frac{(\sqrt{225} - 11) \cdot 12}{-12 - (8 - 6^2)} - |-3|$

5. $\frac{3}{2} [(58 - 10^2) \div (\sqrt{16} + 3)]$

6. $\frac{56 \div (7 - 9)^3 - 25}{23 - 5 \cdot 4}$

Directions: Evaluate each expression given the replacement values.

7. $a^2 + 2(b - 6) - 17$ (if $a = -7$ and $b = 2$)

8. $\frac{8x - 2y}{10xy}$ (if $x = 4$ and $y = -7$)

9. $\frac{3}{4} m - 2n^2 $ (if $m = -4$ and $n = 6$)	10. $\frac{(4c + 9d)^2}{c^2 + 3d^2}$ (if $c = 3$ and $d = -2$)
11. $-w^2 - 11uv + 2v^2$ (if $u = -1$, $v = 8$, and $w = -3$)	12. $\frac{2}{5}(x - 4y) + \frac{1}{2}(2x + y)$ (if $x = 1$ and $y = -6$)
13. $\frac{a^3 - \sqrt{2ab}}{(a - b)^2}$ (if $a = 4$ and $b = 8$)	14. $p^2 + 2pq - 3q^2$ (if $p = \frac{1}{4}$ and $q = \frac{2}{3}$)

Directions: Simplify each expression below by distributing and/or combining like terms.

15. $9x - 2 + 3x - 5$	16. $-2(6m - 7) + 3(m - 13)$
17. $17 - (2w + 3) + 7(10 - w)$	18. $19x + 2y - 10y - 7x$
19. $3(-2a + 8b) - (9b - a)$	20. $7x(5 - y) - 3(9x + 2) - 4xy$