Name_____

Unit 1: Expressions

WS 3: Distributive Property, Simplifying and Evaluating Expressions

Simplify by distributing and collecting like terms. *Show your work.*

1. $3(4x + 6) + 7x$
2. $m + 3(2m + 5) + 7$
3. $7(2 + 3x) + 8$
4. $5(m + 9) – 4 + 8m$
5. $9 + 5(4x + 4) =$
6. $3m + 2(5 + m) + 5m$
7. $12 + 3(x + 8)$
8. $6m + 14 + 3(3m + 7)$
9. $(-x^4 + 13x^5 + 6x^3) + (6x^3 + 5x^5 + 7x^4)$
10. $–10(1 – 9x) + 6(x – 10)$
11. $5(−2n + 4) + 2(n + 3)$
12. $−3(10b + 10) + 5(b + 2)$
13. $−7(n + 3) − 8(1 + 8n)$
14. $3(7x + 2) + 8x$
15. $4(2m + 6) + 3(3 + 5m)$
16. $3(4x^2y^3 + 2x^2) + 4(2x^2 + 3x^2y^3)$
17. $2(1x^3y + 5x^2 + 3xy) + 3(4xy + 2x^2 + 5x^3y)$
18. $(3v^5 + 8v^3 − 10v^2) − (−12v^5 + 4v^3 + 14v^2)$

Simplify the expression first.
Then evaluate the resulting expression for the given value of the variable.

1. $3x + 5(2x + 6)$; if $x = 4$

2. $9(2m + 1) + 2(5m + 3)$; if $m = 2$

3. $4 + 6(2x + 7)$; if $x = 3$

4. $7(7 + 5m) + 4(m + 6)$; if $m = 1$

5. $8 + 5(9 + 4x)$; if $x = 2$

6. $2(4m + 5) + 8(3m + 1)$; if $m = 3$

7. $6(4x + 7) + x$; if $x = 2$

8. $5(8 + m) + 2(7m - 7)$; if $m = 3$

9. $p - (9 - (m + q))$; if $m = 4$, $p = 5$, $q = 3$

10. $(a^2 - b) \div 6$; if $a = 5$, $b = 16$

11. $(6 + h^2 - j) \div 2$; if $h = 6$, $j = 4$

12. $y - (4 - x - y \div 2)$; if $x = 3$, $y = 2$