

## Algebra 10-3 Multiplying a Polynomial by a Monomial

### Simplify.

1.  $3x^2(2x - 4)$  \_\_\_\_\_
2.  $m^4(2m^3 + 3m^2 + m)$  \_\_\_\_\_
3.  $-6y^2(2y^2 - 4y + 2)$  \_\_\_\_\_
4.  $5(y^2 - 3y) + 2y(3y - 3)$  \_\_\_\_\_
5.  $-5ab(2a^2b + 4a - 2b)$  \_\_\_\_\_
6.  $(2n)(5n) - 2(6n^2)$  \_\_\_\_\_
7.  $8a(5a^2 - 4a) + 3a^2(2a - 5)$  \_\_\_\_\_
8.  $(5a^2b)(2ab) - (3a^3)(2b^2)$  \_\_\_\_\_
9.  $3n^4(2n^3 - 4n + 5)$  \_\_\_\_\_
10.  $a^2(a^4 - a^3 + a^2) - a(a^5 - a^4 - a)$  \_\_\_\_\_

### In 11 and 12, let $\ell$ stand for the length of the rectangle.

11. Give an expression for the area of a rectangle if the width of the rectangle is 5cm longer than the length? \_\_\_\_\_
12. Give an expression for the area of a rectangle if the width of the rectangle is 4 times as long as the length? \_\_\_\_\_
13. Tom's weight,  $t$ , is five pounds more than twice Jim's weight,  $j$ . The product of their weights is 250.
  - a.) Give an equation that represents this situation. \_\_\_\_\_
  - b.) Solve the equation using the Quadratic Formula.
 

Tom's weight = \_\_\_\_\_

Jim's weight = \_\_\_\_\_