

NAME: \_\_\_\_\_

## UNIT 4 • EXTENDING THE NUMBER SYSTEM

### Lesson 2: Operating with Polynomials

#### Practice 4.2.2: Multiplying Polynomials

Find each product.

1.  $(x + 10)(x - 7)$

2.  $(3x + 5)(x^3 + 4x)$

3.  $(2x + 1)(x^4 - 6x + 3)$

4.  $(x^5 - 2)(x^2 + 2x + 4)$

5.  $(2x^2 + x - 6)(10x + 4)$

6.  $(-x^3 - x^2 + 2)(x^3 + 3x^2 + 2)$

The area of a rectangle is found using the formula  $\text{area} = lw$ , where  $l$  is the length of the rectangle and  $w$  is the width. Find the area of each rectangle with the given lengths and widths.

7.  $l = x + 14$ ;  $w = 3x + 1$

8.  $l = x^2 - 8$ ;  $w = -x + 12$

9.  $l = x^2 - 4$ ;  $w = 5x + 10$

10.  $l = 4x^2 + 8$ ;  $w = 2x^2 - 3$