Name _____

3-2 Additional Practice

Adding, Subtracting and Multiplying Polynomials

Add or subtract the polynomials.

1. $(4x^3 + 2x + 2x^2 - 8) + (2x^3 + x^2 + 9)$

2. $(y^3 + 6x^2y^2 - 4xy - 8) - (2y^3 - 7x^2y^2 - 2xy - y + 8)$

3. $(9a^3b + 6ab - 4) - (10a^3b - 6a^2b^2 - 6)$

Multiply the polynomials.

4. $-2cd(5c^2 - 5cd - d^2)$

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

Are the following polynomial sets open or closed?

6. $(x^2 + x - 4) - (x^2 + x + 8)$

7. $(2 - x)(1 + 3x)$

8. $(5b - 3c)(7b - 3c)$

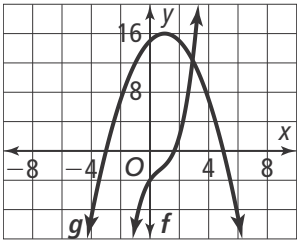
Write a Polynomial Function.

9. Write and simplify a polynomial expression to find the area of 4 circles. Each circle has a radius of $(4a - 6)$.

10. If the length of a rectangle in terms of x centimeters is $5x^2 + 4x - 4$ and its width is $3x^2 + 2x + 6$ centimeters, what is the perimeter of the rectangle? Simplify.

Compare the maximum values and the end behavior of the functions of *f* and *g*.

11.



12.