

Algebra I

Review for Quiz #6

Adding, Subtracting and Multiplying Polynomials
(11.1-11.3)

NAME: _____

DATE: _____ HOUR: _____

You may NOT use a calculator on the quiz.

Part I. Identifying Polynomials

Identify each polynomial by name (monomial, binomial, or trinomial) and degree.

1. $x^4 + 2x^2 + 7x$

degree: _____

2. $y + 2$

degree: _____

3. $4a^5$

degree: _____

Part II. Adding and Subtracting Polynomials

Write all sums and differences in *standard form*.

1. $(2x^4 + 4x + 1) + (3x^4 + 5x - 3)$

2. $(8y^4 + 5y + 2) + (8y^3 + 5y - 5)$

3. $(9a^3 + 4a + 10) + (a^3 + 5a^2 - 3a)$

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

5. $(p^4 + 4p + 1) - (3p^4 + 5p - 1)$

6. $(5x^3 + 2x + 7) - (3x^4 + 5x + 5)$

7. $(2k^4 + 1) - (2k^4 - 5k)$

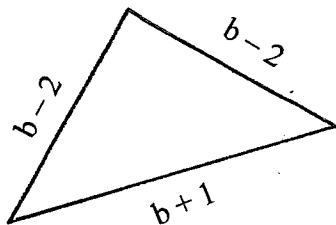
8. $(x^4 + 4x) - (-8x^4 + 2x - 9)$

9. Subtract $(4x + 1)$ from $(3x^2 + 5x - 3)$

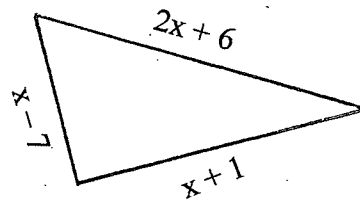
10. Subtract $(-4b^4 + 4)$ from $(b^4 + 5b - 4)$

11. For each triangle, write a polynomial for perimeter.

a.



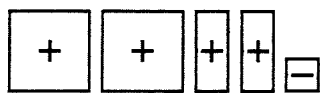
b.



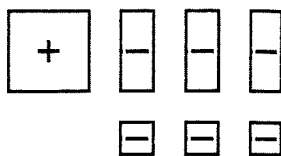
Part III. Polynomial Models

A. Identify the expressions that the algebra tiles represent.

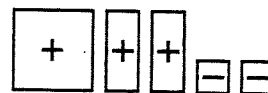
1.



2.

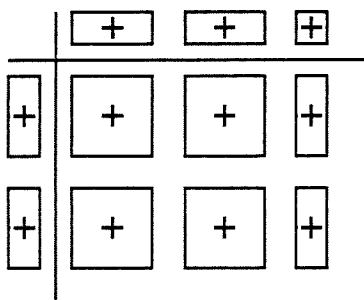


3.

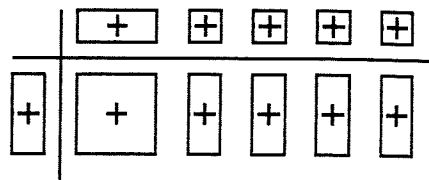


B. Identify the multiplication problems (factors and products) that are modeled by the tiles.

1.



2.



Part IV. Multiplying Polynomials

Write all polynomials in *standard form*.

A. Use the Distributive Property to find each product.

1. $-3(b - 2)$ _____

2. $x(x + 3)$ _____

3. $2c^2(c^2 - 7c)$ _____

4. $-4f^3(f^5 + 3f^2)$ _____

5. $3k^2(k^2 + 4k - 2)$ _____

6. $-5x(x^2 - 3)$ _____

B. Find each product using the FOIL method.

1. $(b + 1)(b - 2)$ _____

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

3. $(3c + 2)(c + 2)$ _____

4. $(4x - 4)(x - 3)$ _____

5. $(5d - 3)(4d - 2)$ _____

6. $(2x + 6)(x + 1)$ _____

C. Draw a rectangle with length $a + 3$ and width $a - 1$. Write a polynomial for the area of the rectangle.
