Algebra 1
8.1-8.4 Review

Name: Key

For numbers 1 – 4, add or subtract the polynomials. Be sure to write your answer in standard form. Then classify the polynomial by terms and degree

1. $(3x^2 + 5x + 7) + (8x + 4 + x^2)$

Answer: $4x^2+13x+11$

Quadratic Trinomial

2. $(-8x^3 + 2x^2 + 4) + (-9x^3 - 4x^2 + 2x + 10)$

Answer: $-17x^3-2x^2+2x+14$

cubic polynomial

3. $(2x + 1 + 9x^4) - (5x^4 + 2x + 12)$

Answer: $4x^4-11$

Quartic Binomial

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

Answer: $-3x-3$

Linear Binomial

For numbers 5 – 12, multiply the polynomials.

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

$24x^5-18x^2$

6. $(2x + 6)(3x - 8)$

$6x^2+2x-48$

7. $(x + 8)(x - 8)$

x^2-64

8. $(x + 7)^2$

$x^2+14x+49$

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

x^3+2x^2+4x

$3x^2+6x+12$

$x^3+5x^2+10x+12$

10. $(3x - 2y)^2$

$9x^2-12xy+4y^2$

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

x^3-2x^2-3x

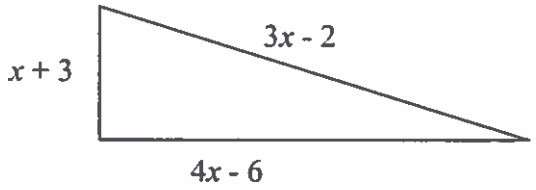
$-4x^2+8x+12$

$x^3-6x^2+5x+12$

12. $(4x - 5)(7x - 12)$

$28x^2-83x+60$

For 13 & 14, use the following right triangle:



13. Write a polynomial expression for the perimeter.

$(x+3) + (3x-2) + (4x-6)$

$8x - 5$

14. Write a polynomial expression for the area. ($A = \frac{1}{2}bh$)

$\frac{1}{2}(4x-6)(x+3)$

ONLY!

$(2x-3)(x+3)$

$2x^2 + 3x - 9$