

Algebra 1

Chapter 8
Section 8-7

Factoring Types

Factoring out a Greatest Common Factor (GCF)

$$12x^2 - 20x$$

$$4x(3x - 5)$$

Factoring a Polynomial: $x^2 + bx + c$

$$x^2 - 8x + 15$$

$$(x - 5)(x - 3)$$

Factoring a Polynomial: $ax^2 + bx + c$

$$15x^2 + 4x - 3$$

$$(5x + 3)(3x - 1)$$

Combining Factoring Types

$$3x^2 - 15x + 12$$

Factor Using GCF

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

$$(x - 1)(x - 4)$$

$$3(x - 1)(x - 4)$$

$$3(x - 1)(x - 4)$$

$$30x^2 + 48x - 24$$

$$6(5x^2 + 8x - 4)$$

$$5x^2 - 2x + 10x - 4$$

$$x(5x - 2) + 2(5x - 2)$$

$$6(5x - 2)(x + 2)$$

$$6(5x - 2)(x + 2)$$

Combining Factoring Types

$$33x^4 + 88x^3 + 44x^2$$

Factor Using GCF

$$11x^2(3x^2 + 8x + 4)$$

$$3x^2 + 6x + 2x + 4$$

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

$$11x^2(x + 2)(3x + 2)$$

$$11x^2(x + 2)(3x + 2)$$

In-class Practice

Factor Completely:

$$2y^2 - 14y + 12$$

$$3x^2y^2 - 11xy^2 + 6y^2$$

$$5np^2 + 20np - 60n$$

$$25c^2 + 50c - 75$$

Special Cases Review

Simplify:

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

$$9x^2 - 16$$

$$(x + 7)^2$$

$$x^2 + 14x + 49$$

Factoring Special Cases

Factor

$$x^2 - 4$$

$$x^2 - 6x + 9$$

Factor

$$36x^2 - 25$$

$$100a^2 - 9$$

Combining Concepts

FACTOR COMPLETELY:

$$900x^4 - 2500x^2$$

$$18x^2 - 98$$