

Assignment 7

Special Products

Use the patterns we developed in class to find these special products. If you use FOIL do so mentally rather than writing out the whole sequence.

1. $(x+6)^2$

2. $(x-10)^2$

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

4. $(x-3)^2$

5. $(x+8)^2$

6. $(x-9)(x+9)$

Factor each of the quadratic expressions.

1. $2x^2 + 3x + 1$

2. $5x^2 + 11x + 2$

3. $3x^2 + 7x - 20$

4. $2x^2 - 7x - 15$

5. $2x^2 + 13x + 15$

6. $3x^2 + x - 10$

Name _____

Factor each of the quadratic expressions.
These work with the special products in reverse.

1. $x^2 + 6x + 9$

2. $x^2 - 25$

3. $x^2 - 12x + 36$

4. $x^2 + 20x + 100$

5. $x^2 - 9$

6. $x^2 - 14x + 49$

7. $9x^2 - 49$

Factor using the greatest common factor ~GCF.

1. $10x^3y^3 + 6x^4y^2$

2. $x^6 + 2x^4 - x^2$

3. $4ab^3 - 8a^2b^4$

Factor twice, first the GCF and then factor using the special products in reverse

4. $5x^2 - 45$

5. $2x^2 - 50$

6. $2y^3 - 12y^2 + 18y$

Review

Simplify by performing the indicated operations.

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

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

3. $(x-5)^2$

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

5. $-ab^2(a^2b^2 - 3a^2b - 1)$

6. $(3x - y)(3x + y)$

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

8. $(x-5)(3x^2 - 5x + 2)$

9. $(-ab^2)(a^3b)(-3a^2)$

10. $(3x - 4)^2$