

5.5 Factoring Review

- Need To Know
 - Factoring Review
 - Practice



Ways to Factor Based on Terms

- A. Check for GCF on all factoring (Always do first!)
- B. Look at the Number of Terms
 - 2. Two Terms – Formulas
 -
 -
 - 3. Three Terms
 - Guess, check, and revise
 - Formulas:
 - 4. Four Terms
 -
- C. Always Factor Completely



Factoring Practice

Factor:

$$3x^4 - 27x^2$$

WAYS TO FACTOR

- A. Factor GCF
- B. Look at the Number of Terms
 - 2. Two Terms – Formulas
 - $x^2 - y^2 = (x + y)(x - y)$
 - $x^2 + y^2$ is prime
 - 3. Three Terms
 - Guess, check, and revise
 - Formulas

$$x^2 + 2xy + y^2 = (x + y)^2$$

$$x^2 - 2xy + y^2 = (x - y)^2$$
 - 4. Four Terms
 - By Grouping
- C. Always Factor Completely



Factoring Practice

Factor:

$$2x^5 + 20x^4 + 50x^3$$

WAYS TO FACTOR

- A. Factor GCF
- B. Look at the Number of Terms
 - 2. Two Terms – Formulas
 - $x^2 - y^2 = (x + y)(x - y)$
 - $x^2 + y^2$ is prime
 - 3. Three Terms
 - Guess, check, and revise
 - Formulas

$$x^2 + 2xy + y^2 = (x + y)^2$$

$$x^2 - 2xy + y^2 = (x - y)^2$$
 - 4. Four Terms
 - By Grouping
- C. Always Factor Completely



Factoring Practice

Factor:

$$y^5 + 36y^3$$

WAYS TO FACTOR

- A. Factor GCF
- B. Look at the Number of Terms
 - 2. Two Terms – Formulas
 - $x^2 - y^2 = (x + y)(x - y)$
 - $x^2 + y^2$ is prime
 - 3. Three Terms
 - Guess, check, and revise
 - Formulas

$$x^2 + 2xy + y^2 = (x + y)^2$$

$$x^2 - 2xy + y^2 = (x - y)^2$$
 - 4. Four Terms
 - By Grouping
- C. Always Factor Completely



Factoring Practice

Factor:

$$15a^2 - a - 2$$

WAYS TO FACTOR

- A. Factor GCF
- B. Look at the Number of Terms
 - 2. Two Terms – Formulas
 - $x^2 - y^2 = (x + y)(x - y)$
 - $x^2 + y^2$ is prime
 - 3. Three Terms
 - Guess, check, and revise
 - Formulas

$$x^2 + 2xy + y^2 = (x + y)^2$$

$$x^2 - 2xy + y^2 = (x - y)^2$$
 - 4. Four Terms
 - By Grouping
- C. Always Factor Completely



Factoring Practice

Factor:

$$4x^4 - 12x^3 - 40x^2$$

WAYS TO FACTOR

- A. Factor GCF
- B. Look at the Number of Terms
 - 2. Two Terms – Formulas
 - $x^2 - y^2 = (x + y)(x - y)$
 - $x^2 + y^2$ is prime
 - 3. Three Terms
 - Guess, check, and revise
 - Formulas

$$x^2 + 2xy + y^2 = (x + y)^2$$

$$x^2 - 2xy + y^2 = (x - y)^2$$
 - 4. Four Terms
 - By Grouping
- C. Always Factor Completely



Factoring Practice

Factor:

$$2a^5b + 6a^4b + 2a^3b$$

WAYS TO FACTOR

- A. Factor GCF
- B. Look at the Number of Terms
 - 2. Two Terms – Formulas
 - $x^2 - y^2 = (x + y)(x - y)$
 - $x^2 + y^2$ is prime
 - 3. Three Terms
 - Guess, check, and revise
 - Formulas

$$x^2 + 2xy + y^2 = (x + y)^2$$

$$x^2 - 2xy + y^2 = (x - y)^2$$
 - 4. Four Terms
 - By Grouping
- C. Always Factor Completely



Factoring Practice

Factor:

$$3ab + 9a + 2b + 6$$

WAYS TO FACTOR

- A. Factor GCF
- B. Look at the Number of Terms
 - 2. Two Terms – Formulas
 - $x^2 - y^2 = (x + y)(x - y)$
 - $x^2 + y^2$ is prime
 - 3. Three Terms
 - Guess, check, and revise
 - Formulas
 - $x^2 + 2xy + y^2 = (x + y)^2$
 - $x^2 - 2xy + y^2 = (x - y)^2$
 - 4. Four Terms
 - By Grouping
- C. Always Factor Completely



5.5 Conclusion

- A. Check for GCF on all factoring (Always do first!)
- B. Look at the Number of Terms
 - 2. Two Terms – Formulas
 - $x^2 - y^2 = (x + y)(x - y)$
 - $x^2 + y^2$ is prime
 - 3. Three Terms
 - Guess, check, and revise
 - Formulas: $x^2 + 2xy + y^2 = (x + y)^2$
 $x^2 - 2xy + y^2 = (x - y)^2$
 - 4. Four Terms
 - By Grouping
- C. Always Factor Completely