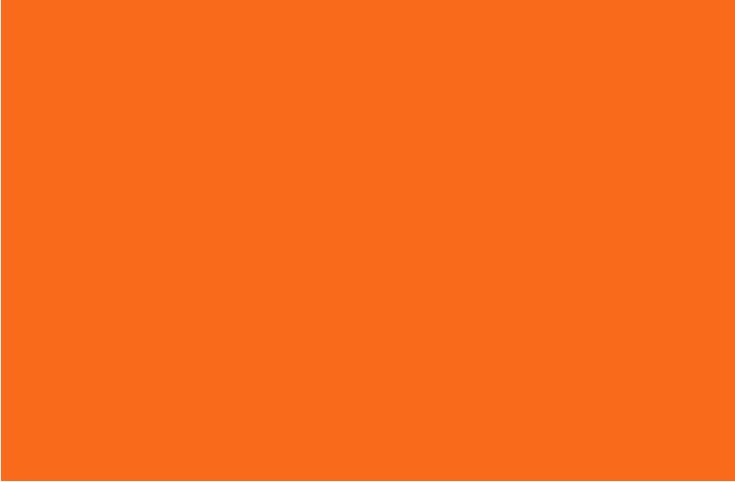# Unit 6

Factoring

Greatest Common Factor

[GCF]

Greatest Common Factor

- **<u>Definition:</u>**
  - Is the biggest number that can be divided into both given numbers

- *Examples*
  - 1.) 6, 14   2.) 8, 12

Examples *(cont'd)*

3.) $20, 45$

4.) $6, 18, 27$

5.) $6x^2, 12x^3$

6.) $7a, 14a^2$

More examples

7.) $6ab^2, 10a^2b^3$

8.) $27x^4y^7z^3, \quad 63x^2y^8z^4$

Factoring – *Using GCF*

Steps to Follow

1. Find the GCF
2. Pull out the GCF from each term
   - To do this, divide each term by the GCF
   - Write what's left in parentheses

Examples:

- 1.) $3x + 6$ 2.) $5x - 35$

Examples *(cont'd)*

3.) $4x^2 - 12$

4.) $6x^2 + 10x$

5.) $12x + 144x^2$

6.) $5x - 10y$

Examples *(cont'd)*

7.) $6x^2 + 10x - 4$ 8.) $13x^3 - 39x^2$