

1.1 - Factoring Out Monomials/GCF

Key

Recall:

1. Standard Form of Quadratic Function:

$$\underline{Ax^2 + Bx + C}$$

2. $(2x + 7)(3x + 6)$

$$6x^2 + 12x + 21x + 42$$

$$\boxed{6x^2 + 33x + 42}$$

3. Factor: numbers and/or expressions you can multiply together to get another number and/or expression

Note - When factoring an expression, first check to see whether the terms have a common factor.

Example 1.) Factor the expression $\frac{5x^2 - 45}{5}$

$$5(x^2 - 9)$$

Example 2.) Factor the expression $\frac{6q^2 - 14q + 8}{2}$

$$2(3q^2 - 7q + 4)$$

Example 3.) Factor the expression $\frac{-5z^2xy + 20zxy}{-5zxy}$

* "A" must always be positive

$$-5zxy(z - 4)$$

Example 4.) Factor the expression $12k^5m^4 - 21k^4m^4 + 3k^3m^4$

$$3k^3m^4(4k^2 - 7k + 1)$$