

1.4 Factoring Special Patterns

Recall:

1. Quadratic function:

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

2. $(x + 2)(x + 1)$

Definitions:

Special Factoring Patterns:

- a. Difference of Two Squares: $\underline{a^2 - b^2 = (a+b)(a-b)}$

Example:

- b. Perfect Square Trinomial: _____ or _____

Examples:

Example 1.) $x^2 - 49$

$\begin{matrix} a & b \\ x & 7 \end{matrix}$

$$(x+7)(x-7)$$

Example 2.) $k^2 - 9$

$\begin{matrix} k & 3 \end{matrix}$

$$(k+3)(k-3)$$

Example 3.) $d^2 + 12d + 36$

Example 4.) $z^2 - 26z + 169$