5x-2y ≤ 75

$\left[\begin{smallmatrix} a & b \\ c & d \end{smallmatrix}\right]$

$S = Pe^{rt}$

$APY = (1+\frac{r}{n})^n - 1$

Math 1090 ~ Business Algebra

Section 3.1 Quadratic Equations in One Variable

Objectives:
- Identify a quadratic equation in one variable.
- Apply the Zero Product Property to solve quadratic equations in one variable.
- Apply four strategies for solving a quadratic equation in one variable.

Definition: A Quadratic Equation can be written in the form

$ax^2 + bx + c = 0$, where $a, b, c \in \mathbb{R}$, $a \neq 0$

Ex 1: Solve $5x^2 - 32 = x^2 + 8$

Ex 2: Solve $2x(5x + 6) = 16$

Strategies to Solve

1. Square Root Technique

2. Factor Technique

3. Completing the Square

4. Quadratic Formula

Ex 3: Solve $y^2 + y - 4 = 0$

Ex 4: Solve $x^2 + 4 = 6x$

Ex 5: Solve $\dfrac{1}{x-10} - \dfrac{1}{x-9} = 1$