**3.5 – Solving Quadratic Equations**

MCR3U

To "solve a quadratic equation" means to find the x-values that make a statement true.

In general, we want to rearrange to the form $ax^{2}+bx+c=0, $then determine the zeros of the equation.

This can be done in many ways, including:

1. Graphing to find the x-intercepts

1. Factoring

1. The Quadratic Formula

If an exact solution is required, answers should be expressed as radicals or rational numbers.

Example 1: Solve…

1. $x^{2}-8x+15=0$b) $x^{2}-8x+2=0$

c) $\left(x-4\right)^{2}=2x-9$ d) $3x^{2}+11x+6=0$

**Word Problem - Width of area around rectangle**

A swimming pool has a deck around the outside, of equal width. Determine the value(s) of x if the area of the deck and the swimming pool are the same.