12.1.15

1. Solve the following quadratic equation using the Quadratic Formula below. (Hint: substitute a, b and c.)

2. Check your work by Factoring.

$x^2 + 8x + 12 = 0$

$a = 1 \quad b = 8 \quad c = 12$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-(8) \pm \sqrt{8^2 - 4(1)(12)}}{2(1)}$$

$$x = \frac{-8 \pm \sqrt{64 - 48}}{2}$$

$$x = \frac{-8 \pm \sqrt{16}}{2}$$

$$x = \frac{-8 \pm 4}{2}$$

$$x = \frac{-8 + 4}{2} \qquad x = \frac{-8 - 4}{2}$$

$x = -2 \quad x = -6$

a·c

12

6 · 2

8

	x	6
x	x^2	$6x$
2	$2x$	12

$(x+2)(x+6) = 0$

$x = -2 \quad x = -6$