

# Math 1513 - College Algebra

## Quiz #6 - 2018.09.05

### Solutions

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The quadratic formula is given by:

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

Without solving for the actual solutions, determine how many solutions there are to the following quadratic equation:

$$3x^2 - 2x + 4 = 0$$

We use the discriminant, which is  $b^2 - 4ac$ . For this example:  $a = 3$ ,  $b = -2$ , and  $c = 4$ .

$$b^2 - 4ac = (-2)^2 - 4(3)(4) = 4 - 48 = -44 < 0,$$

therefore there are no real solutions, only two complex ones.