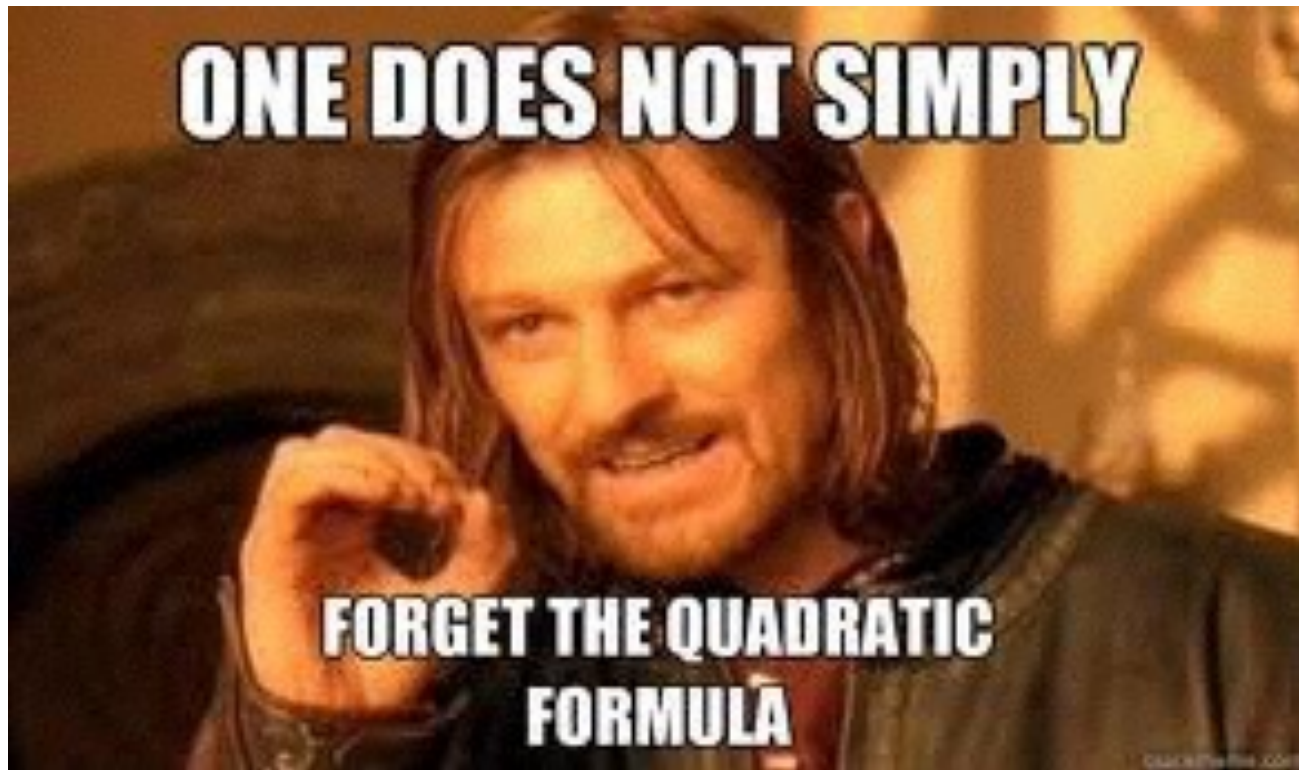


# Lesson 3.2.4: Applying the Quadratic Formula



By the end of this lesson, I will be able to answer the following questions...

1. What is the quadratic equation/formula?
2. How do I use the quadratic formula to solve a quadratic equation?
3. What is the discriminant and what does it do?

# Vocabulary

1. Quadratic Equation

$$Ax^2 + Bx + C$$

2. Quadratic Formula

$$\frac{-B \pm \sqrt{B^2 - 4AC}}{2A}$$

3. Discriminant

$$\sqrt{B^2 - 4AC}$$

# Prerequisite Skills with Practice

In our “notecard” example of  $2x^2 - x - 3$   
what exactly did we find?

Solve using the  
quadratic equation

$$\frac{-B \pm \sqrt{B^2 - 4AC}}{2A}$$

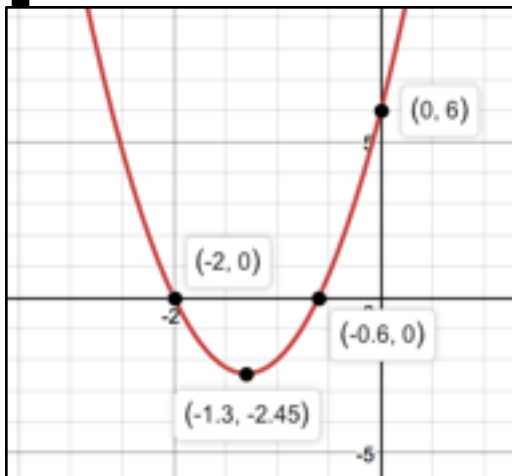
$$5x^2 + 13x + 6 = 0 \quad x^2 + 8x + 16 = 0$$

$$x^2 + 8x + 30 = 0 \quad -x^2 + 8x - 3 = 0$$

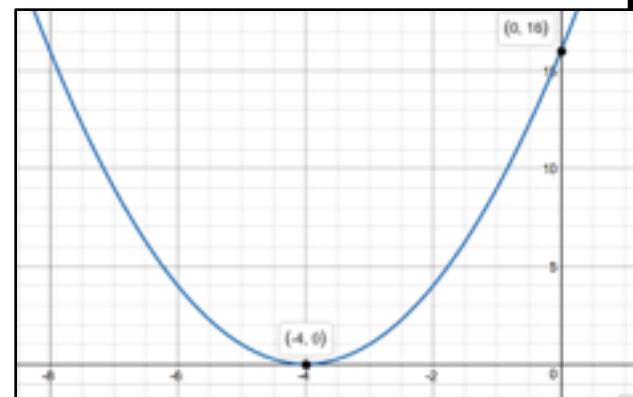
Using the Discriminant to determine the number of x - intercepts.

$$\sqrt{B^2 - 4AC}$$

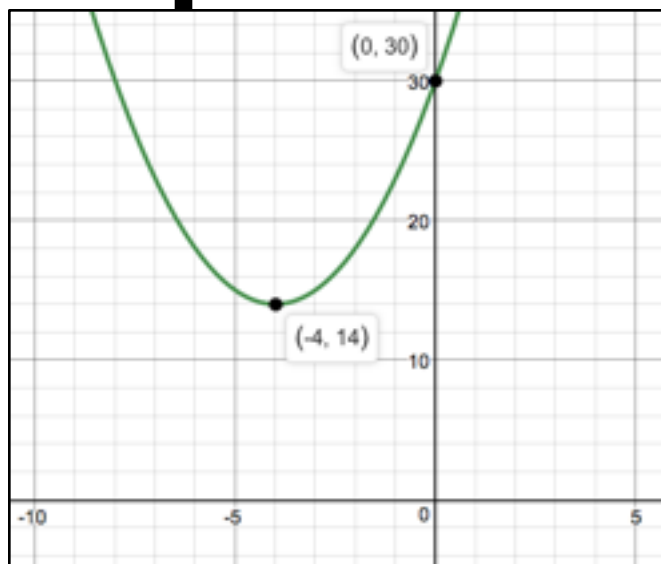
$$5x^2 + 13x + 6 = 0$$



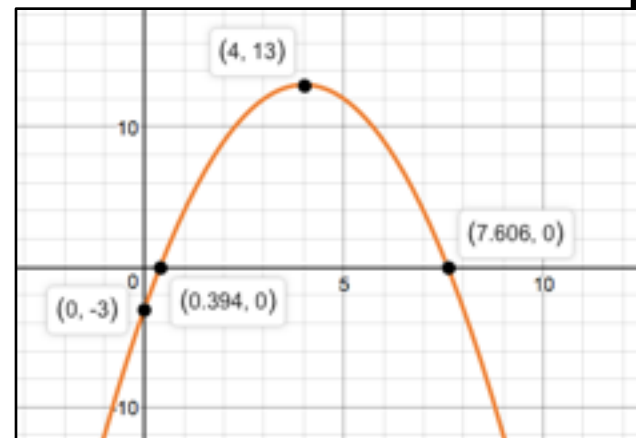
$$x^2 + 8x + 16 = 0$$



$$x^2 + 8x + 30 = 0$$



$$-x^2 + 8x - 3 = 0$$



# THE END



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