CHAPTER 12: QUADRATIC EQUATIONS

10.6 Solving Quadratics by the Quadratic Formula

OBJECTIVES

❑ I can solve a quadratic equation by using the quadratic formula

PART 1: THE QUADRATIC FORMULA

▪ EVERY quadratic equation can be solve with the quadratic formula

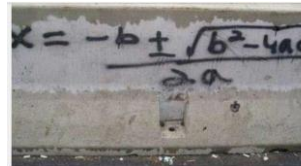| Rule	Quadratic Formula
If $ax^2 + bx + c = 0$, and $a \neq 0$, then $$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$	

A bad boy couldn't decide whether or not to go to a radical party.

But he was being a square, and got turned down by 4 awesome chicks.

And it was all over by 2 AM.

ampullae:

djavjr:

but why would you graffiti the quadratic formula

some thugs just want to watch the world learn

PART 1: THE QUADRATIC FORMULA

1 Use the quadratic formula to solve each equation.
a. $x^2 - 2x - 8 = 0$ **b.** $x^2 - 4x = 117$

PART 1: THE QUADRATIC FORMULA

2 Solve each equation. Round to the nearest hundredth.
a. $-3x^2 + 5x - 2 = 0$ **b.** $7x^2 - 2x - 8 = 0$

PART 2: WHEN TO USE WHICH METHOD?

There are many methods for solving a quadratic equation. You can always use the quadratic formula, but sometimes another method may be easier.

Method	When to Use
Graphing	Use if you have a graphing calculator handy.
Square Roots	Use if the equation has no x term.
Factoring	Use if you can factor the equation easily.
Completing the Square	Use if the x^2 term is 1, but you cannot factor the equation easily.
Quadratic Formula	Use if the equation cannot be factored easily or at all.

CAN YOU?? PROVE IT!!

❑ I can solve a quadratic equation by using the quadratic formula

23. $3q^2 - 12q = 15$