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AAOU

How do I sdve for x 9/15

in a Quadratic equation?

Ex1: $x^2 + 6x + 8 = 0$

x	x^2	2x
4	4x	8

x 2

$8x^2$

4x 2x

6x

+

Zero Product Property

$(x+4)(x+2)=0$

↓ ↓

$x+4=0$ $x+2=0$

$-4\ -4$ $-2\ -2$

$x = -4$ $x = -2$

If $ax^2+bx+c=0$ then

$$x = \frac{-b \pm \sqrt{(b)^2-4\cdot a\cdot c}}{2\cdot a}$$

Ex 1: $3x^2 - x - 5 = 0$

$a = 3 \quad b = -1 \quad c = -5$

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

$x = \frac{1 \pm \sqrt{(-1)^2 - 4 \cdot 3 \cdot -5}}{2 \cdot 3}$

$x = \frac{1 \pm 7.81}{6}$

$1 + 7.81 = \frac{8.81}{6} = 1.47$

$1 - 7.81 = \frac{-6.81}{6} = -1.14$

$x = 1.47, -1.14$

$$4x2: 2x^2+5x=6$$

$$-6 \quad -6$$

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

$$a=2 \quad b=5 \quad c=-6$$

$$x=\frac{-5\pm\sqrt{(5)^2-4\cdot 2\cdot -6}}{2\cdot 2}$$

$$x=\frac{-5\pm 8.54}{4}$$

+ −

.89, -3.39