

Mathematics 10D

Q.08 – Solving By Quadratic Formula

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The quadratic formula is the formula that solves all. In order to use it, you need to setup the quadratic in standard form. The quadratic formula is derived by completing the square, then solving from the vertex form.

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

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

Let's give it a try.

$$5x^2 + 12x - 32 = 0$$

Give it another go.

$$5x^2 + 5x + 8 = 0$$

Example 3.

$$4x^2 + 8x - 10 = 11$$

Are the answers always neat?

$$11x^2 + 7x - 20 = 6x + 8x^2$$

Solving Using The Quadratic Formula

Solve each equation with the quadratic formula.

1) $6n^2 + 7n - 55 = 0$

2) $12k^2 - 11k - 24 = 0$

3) $3p^2 + 5 = 8$

4) $8p^2 + 5p + 2 = -9$

5) $9m^2 - 7m = -2$

6) $8n^2 + 6n = 24$

7) $-3x^2 + 5x - 39 = -6x^2 + 11$

8) $15n^2 - 3n - 7 = -6n + 11n^2$