

Cornell Mote

Solving Quadratic Equations

Today's Standard

HSA.REI.B4b - Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as a ± bi for real numbers a and b.

| Cues | Notes |
|-----------------------|--|
| Quadratic equation | Quadratic equations can be solved by various methods depending on their form. |
| Square roots | Square roots can be used when the equation is in the form $x^2 = k$. |
| Completing the square | Completing the square involves rearranging the equation to form a |
| Quadratic formula | perfect square trinomial. |
| Complex solutions | The quadratic formula is a universal method for solving any quadratic equation. |
| | Complex solutions occur when the discriminant of the quadratic equation is negative. |

Summary

Quadratic equations can be solved using multiple methods such as square roots, completing the square, the quadratic formula, and factoring. Recognizing complex solutions is also important.