

The Quadratic Formula

Name: _____

Date: _____ Score: _____

UNIT TOPICS

- * $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
- * Discriminant: $b^2 - 4ac$ tells number of solutions
- * Choosing the best method

PRACTICE PROBLEMS - Show all work

1. State the quadratic formula: ____
2. Find the discriminant of $x^2 - 4x + 5$: ____ . Real solutions: ____
3. Find the discriminant of $x^2 - 6x + 9$: ____ . Real solutions: ____
4. Solve using the formula: $x^2 - 5x + 6 = 0$
5. Solve using the formula: $2x^2 + 3x - 2 = 0$
6. Solve using the formula: $x^2 + 2x + 5 = 0$ (describe the result)
7. If discriminant > 0 , there are ____ real solutions.
8. If discriminant $= 0$, there is ____ real solution.
9. If discriminant < 0 , there are ____ real solutions.
10. Which method is best for $x^2 + 5x + 6 = 0$: formula or factoring? Why?

Answers (accept equivalent responses and correct reasoning):

1. [Grade based on correct application of concept taught this week]
2. [Grade based on correct application of concept taught this week]
3. [Grade based on correct application of concept taught this week]
4. [Grade based on correct application of concept taught this week]
5. [Grade based on correct application of concept taught this week]
6. [Grade based on correct application of concept taught this week]
7. [Grade based on correct application of concept taught this week]
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9. [Grade based on correct application of concept taught this week]
10. [Grade based on correct application of concept taught this week]