

SPARK Hybrid Education Center

Mathematics | Upper Level

Quadratics: Solving by Factoring

Name: _____

Date: _____ Score: _____

UNIT TOPICS

- * Zero product property: if $ab = 0$, then $a = 0$ or $b = 0$
- * Factoring trinomials: $x^2 + bx + c$
- * Factoring when a is not equal to 1

PRACTICE PROBLEMS - Show all work

1. Factor: $x^2 + 5x + 6 = \underline{\hspace{2cm}}$
2. Solve: $x^2 + 5x + 6 = 0$. Solutions: $\underline{\hspace{2cm}}$
3. Factor: $x^2 - 7x + 12 = \underline{\hspace{2cm}}$
4. Solve: $x^2 - 7x + 12 = 0$. Solutions: $\underline{\hspace{2cm}}$
5. Factor: $x^2 + 3x - 10 = \underline{\hspace{2cm}}$
6. Solve: $x^2 + 3x - 10 = 0$. Solutions: $\underline{\hspace{2cm}}$
7. Factor: $2x^2 + 7x + 3 = \underline{\hspace{2cm}}$
8. Solve: $x(x - 5) = 0$. Solutions: $\underline{\hspace{2cm}}$
9. True or False: $x^2 + 4$ can be factored over the real numbers. $\underline{\hspace{2cm}}$
10. A rectangle has area $x^2 + 8x + 15$. Write its dimensions as binomials: $\underline{\hspace{2cm}}$

TEACHER ANSWER KEY - Quadratics: Solving by Factoring

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]
8. [Grade based on correct application of concept taught this week]
9. [Grade based on correct application of concept taught this week]
10. [Grade based on correct application of concept taught this week]