

Michelle Miller

Lesson Plan

Lesson: Factoring to Solve Quadratic Equations

Length: 30 minutes for lesson, plus 20 minutes for worksheet.

Grade: 9th Grade Algebra

Academic Standard:

A1.8.2 Solve quadratic equations by factoring.

Example: Solve the equation $x^2 - 3x + 2 = 0$ by factoring

Performance Objectives: Given simple quadratic equations, the students will learn how to solve them using factoring with 90% accuracy.

Assessment: A simple worksheet of quadratic equations will be completed using factoring by the students with 90% accuracy.

Advance Preparation by Teacher:

1. Copy worksheets for students
2. Make key for worksheet

Procedure:

Introduction: I will ask the students “Who will be taking another math course besides this one?” Make sure the students know the significance behind this method that you are about to teach. “This is something you will use in the rest of your math courses!” (Bloom: Knowledge)

Step by Step Plan:

1. Have the students sit down in their assigned seats and have them open their book to section 10-5 page 536.
2. Have a student read the “Zero-Product Property” in the yellow box. (Gardner: Verbal)
3. Show what this means by using examples. See Section A.
4. Show students how to factor using examples. See Section B.
5. Put examples on board and have them work with a partner of their choice on these examples. See section B. (Gardner: interpersonal/ Mathematical)
6. Ask “Are there any questions about the concept we just learned?” (Bloom: Comprehension)
7. Show students examples of factoring that are more challenging. See section C.
8. Put 4 problems on the board and choose 4 students to go up to the board and work on them. Have the rest of students work at their seat. (Gardner: Kinesthetic/ interpersonal)
9. Put more examples on the board and ask the students to “solve these problems using the concepts that you learned today?” See section D. (Bloom: Application)
10. Make sure to ask students if there are any more questions.

11. Hand out worksheet and have students do problems #1-9 and turn in at the end of class.

Closure: After all students completed their assignment. Ask the students to raise their hand and name one thing they learned in today's lesson (Bloom: Comprehension). Have 2-3 students answer the question.

Adaptations/ Enrichments:

A boy with a learning disability in mathematical calculation- Have an easier worksheet ahead of time that has calculations using just the Zero Product Property and getting all the Quadratics to equal 0.

A Girl with ADHD- Have her work with another student that will keep her on task. Stand close to her desk while giving directions. Make sure she knows what the directions are.

2 students with math giftedness- Have a worksheet prepared ahead of time that uses different variables and higher numbers to factor.

Self Reflection: Did all the students meet the objective? If not, why? Will I need to re-teach them? Was there enough time for the students to finish the worksheet? What could I have done differently to improve this lesson?

Citations:

Bellman, Allan. Prentice Hall Mathematics Algebra 1. Massachusetts: Prentice Hall, 2004.

Study Guide and Practice Workbook Prentice Hall Mathematics Algebra 1. Massachusetts: Prentice Hall, 2004.