PEP Grade 9 Math — Unit 21: Quadratic Equations • Unit Test (Basic)

PEP · Grade 9 · Term 1 · Mathematics · Unit Test · Basic

AI-generated practice paper · original study aid, not an official examination paper · 40 questions · 100 points

Name: _____ Date: _____ Score: _____

Answer all questions. This paper is worth 100 points. Show your working where appropriate.

I. Multiple Choice

1. Which of the following is a quadratic equation in one variable?
   A. x + 5 = 0
   B. 2x^2 + 3x - 1 = 0
   C. x^3 - 2x + 1 = 0
   D. xy + 2 = 0

2. What is the coefficient of the quadratic term in the equation 3x^2 - 4x + 7 = 0?
   A. 3
   B. -4
   C. 7
   D. 1

3. Which value makes the equation x^2 - 5x + 6 = 0 true?
   A. 1
   B. 2
   C. 4
   D. 5

4. What is the solution to the equation x^2 = 16?
   A. 4
   B. -4
   C. ±4
   D. 8

5. If x = 3 is a solution to x^2 - kx + 6 = 0, what is the value of k?
   A. 5
   B. 4
   C. 3
   D. 2

6. Which expression can be factored as (x - 2)(x - 3)?
   A. x^2 - 5x + 6
   B. x^2 - 6x + 9
   C. x^2 + 5x + 6
   D. x^2 - 5x - 6

7. How many real roots does the equation x^2 + 4 = 0 have?
   A. 0
   B. 1
   C. 2
   D. 3

8. Which of the following equations has equal roots?
   A. x^2 - 2x + 1 = 0
   B. x^2 - 3x + 2 = 0
   C. x^2 - 4x + 5 = 0
   D. x^2 + x - 6 = 0

9. Solve for x: (x - 1)^2 = 9.
   A. x = 4 or x = -2
   B. x = 2 or x = -4
   C. x = 1 or x = -1
   D. x = 3 or x = -3

10. Which equation is equivalent to x^2 + 6x = 7 after completing the square?
    A. (x + 3)^2 = 16
    B. (x + 3)^2 = 9
    C. (x + 6)^2 = 43
    D. (x + 3)^2 = 7