

Systems of Linear and Quadratic Equations Exit Quiz

Part A Instructions: Choose the option that completes the sentence or answers the question.

1. A system of linear and quadratic equations has the equations of the form:
 - a. $y = ax + b$
 - b. $y = ax^2 + bx + c$
 - c. Both a and b
 - d. None of these

2. Based on the number of intersecting points on the graphs of linear and quadratic function in the system of linear and quadratic equations, the system can have:
 - a. 2 solutions
 - b. 1 solution
 - c. 0 solutions
 - d. All of these

3. The solution of a system of linear and quadratic equations is found algebraically by:
 - a. Elimination method
 - b. Graphical method
 - c. Substitution method
 - d. None of these

4. If the graphs of linear and quadratic function do not intersect each other, then the system of equation has:
 - a. 2 solutions
 - b. 1 solution
 - c. 0 solutions
 - d. None of these

Part B Instructions: Answer the question below.

5. Solve the system of equation algebraically.

$$y = x^2 - 3x - 27 \quad ; \quad y = x - 6$$

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Part B Instructions: Answer the question below.

5. Solve the system of equation algebraically.

$$y = x^2 - 3x - 27 \quad ; \quad y = x - 6$$

First put the value of y from linear equation into the quadratic equation.

$$x - 6 = x^2 - 3x - 27 \rightarrow x^2 - 3x - 27 - x + 6 = 0$$

$$\rightarrow x^2 - 4x - 21 = 0$$

$$\rightarrow x^2 - 7x + 3x - 21 = 0$$

$$\rightarrow (x - 7)(x + 3) = 0 \rightarrow x = 7, x = -3$$

$$y = 7 - 6 = 1 \quad ; \quad y = -3 - 6 = -9$$

Solutions: $(7, 1)$, $(-3, -9)$