



SUMMATIVE QUIZ
Mathematics 9 - Quarter 1
S.Y. 2023 - 2024

Name: _____
Grade & Section: _____

Date: _____
Teacher: _____

I. KNOWLEDGE

A. Directions: Determine whether each of the following statements is true or false. Write your answer on the space provided.

_____ 1. The given quadratic equation $-6b^2 - 24b = 10$ is written in standard form.
_____ 2. The equation $\frac{3}{4}x^2 - 3c + 9$ is a quadratic equation.
_____ 3. All quadratic equations can be solved by factoring.
_____ 4. A quadratic equation in the form $x^2 = c$, where $c > 0$, have exactly 2 real solution.
_____ 5. The equation $m^2 = 9$ has imaginary roots.

B. Directions: Determine whether the given equation is a quadratic equation or not. If yes, complete the table by writing the given quadratic equations into its standard form, values of a, b, and c.

| Equations | Standard Form ($ax^2 + bx + c = 0$) | a | b | c |
|-----------------------------|--|---|---|---|
| 1. $k^2 - 6k - 72 = 0$ | | | | |
| 2. $-4x(x - 1) - 5$ | | | | |
| 3. $\frac{5}{6}m - 6^2 = 7$ | | | | |
| 4. $9b^2 + 24 = 7$ | | | | |
| 5. $0 = 3a^2 - a - 6$ | | | | |

II. PROCESS & UNDERSTANDING

A. Directions: Find the roots/solutions of the following quadratic equations using factoring. Write your complete solution in your notebook, then attach the photo in this quiz. No solution no corresponding points. (3 points each)

1. $(x - 5)(x - 7) = 0$ 2. $x^2 + 6x - 72 = 0$
3. $-4m^2 + 16m = 4m$ 4. $3x^2 - 5x - 12 = 0$

B. Directions: The following solutions below are the process or solution in solving quadratic equations by extracting the roots. Evaluate the process and find the error/s if any. Write **NO ERROR** on the space provided if there is no error, otherwise encircle the term, or expression that makes the solution wrong. Write the correct one on the space provided. (3 points each)

1. $x^2 - 49 = 0 \rightarrow x^2 = 49$
Solutions:
 $\sqrt{x^2} = \sqrt{49}$
 $x = \pm 7$
Final Answer: $x = 7; x = -7$

2. $3x^2 + 27 = 0 \rightarrow 3x^2 = -27$
Solutions:
 $\frac{3x^2}{3} = \frac{-27}{3}$ dividing both side by the
coefficient of x^2
 $x^2 = -9$ Simplify
 $\sqrt{x^2} = \sqrt{-9}$ Get the square root of both
sides
 $x = \pm 3$ Solve for x
Final Answer: $x = 3; x = -3$