INOCENCIO SCHOOL, INC.

INOCENCIO SCHOOL MONTESSORI PLAYSKOOL – INOCENCIO INTEGRATED SCHOOL

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FIRST QUARTERLY ASSESSMENT
MATHEMATICS 8
Prepared by: Mr. Jenno E. Benigay

Name: _____ **Score:** _____/70_____

Grade and Section: _____ **Date:** _____

IMPORTANT REMINDER: Following instructions is part of the exam. Failure to follow instructions will cause a **5-point-deduction** from the total raw score.

I. Complete the table below by giving the quadratic, linear and constant term of each quadratic equation. (10 points)

Given	Quadratic Term	Linear Term	Constant Term
$2x^2 + 3x - 5 = 0$	1.	2.	3.
$5x^2 = -9x$	$5x^2$	4.	5.
$-x^2 + 7x = 0$	6.	$7x$	7.
$x^2 + 4x - 4 = 0$	8.	9.	10.

II. Write MUHAMMAD if the following is a quadratic equation and AL-KHWARIZMI if it is not.

_____11. $2x^2 + 3x + 1 = 0$
_____12. $5x + 4 = 0$
_____13. $4x^3 - 2x^2 + x - 7$
_____14. $x^2 - 5x + 6 = 0$
_____15. $3x^2 + 2x^4 - 7 = 0$
_____16. $6x^2 + 2 = 0$
_____17. $x^2 + 7x - 10 = 0$
_____18. $-2x^3 + x^2 - 3 = 0$
_____19. $4x - 9 = 0$
_____20. $(x + 2)(x - 3) = 0$

III. Find the value of the discriminant and describe the solutions of the roots as two equal rational roots, two distinct rational roots, two distinct irrational roots and two unequal imaginary roots. Box the final answer.

21-23. $x^2 + 9 = 0$	24-26. $2x^2 + 4x = 0$
27-29. $5x^2 - 3x + 7 = 0$	30-32. $-x^2 + 6x - 9 = 0$

LIVEWORKSHEETS

IV. Find the sum and product of the roots of following quadratic equations. Show your solution and box the final answer.

33-36. $4x^2 - 8x + 3 = 0$	37-40. $2x^2 + 3x - 4 = 0$
41-44. $4x^2 - 6x + 1 = 0$	45-48. $x^2 + 2x + 5 = 0$

V. Find the roots of each quadratic equation. Show your solution and box the final answer.

49-52. $x^2 - 5x + 6 = 0$	53-56. $x^2 - 2x - 15 = 0$
57-60. $4x^2 - 5x + 1 = 0$	

VI. Solve the following word problems. Show your solution and box the final answer.

61-63. A rectangular garden has an area of 24 square meters. The length of the garden is 2 meters longer than its width. Find the dimensions of the garden. (Area of a rectangle = length x width)

LIVEWORKSHEETS

64-65. A diver jumps from a platform, and her height in meters above the water after t seconds is given by $h(t) = t^2 - 15t - 10$. How long does it take for her to reach the water?

VII. Answer the following question with 2-3 sentences.

66-68. Many algorithms in technology, such as those used in computer graphics or video game design, rely on solving quadratic equations to create realistic simulations. Why do you think it's valuable for students to learn and appreciate quadratic equations, even if they don't plan on becoming mathematicians?

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69-70. Solving quadratic equations can involve multiple methods (factoring, using the quadratic formula, or completing the square). Which method do you personally find most effective, and why?

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*****END OF EXAM*****

LIVEWORKSHEETS