

Grade 8 - Final Exam Practice Test
Algebra 1 -Trimester 3

NAME _____ CLASS _____ Date: _____/20

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1. Choose the correct answer. The question numbers on this paper are not in order or sequence.

<p>1. Solve for x: $x + 9 = 17$</p> <ul style="list-style-type: none"> • A. 26 • B. 9 • C. 8 • D. -8 	<p>2. Solve for y: $y - 5 = 11$</p> <ul style="list-style-type: none"> • A. 16 • B. 6 • C. -16 • D. 11 	<p>3. Solve for z: $6z = 54$</p> <ul style="list-style-type: none"> • A. 8 • B. 10 • C. 9 • D. 48 	<p>7. What is the solution to $3(x - 2) = x + 8$?</p> <ul style="list-style-type: none"> • A. $x = 7$ • B. $x = -7$ • C. $x = 5$ • D. $x = 4$
<p>4. Solve for a: $-\frac{a}{5} = 7$</p> <ul style="list-style-type: none"> • A. 12 • B. -35 • C. 2 • D. 30 	<p>5. Solve for m: $m + 15 = 0$</p> <ul style="list-style-type: none"> • A. 15 • B. 0 • C. -15 • D. -30 	<p>6. Solve for x: $4x + 3 = 3x + 11$</p> <ul style="list-style-type: none"> • A. 14 • B. 8 • C. -8 • D. 7 	<p>10. If $8x + 1 = 5x + 16$, what is the value of x?</p> <ul style="list-style-type: none"> • A. 3 • B. 5 • C. 7 • D. 9
<p>8. Find x if $4x - 6 = 2(x + 3)$.</p> <ul style="list-style-type: none"> • A. $x = 6$ • B. $x = 3$ • C. $x = -6$ • D. $x = -3$ 	<p>9. Solve: $5(x + 1) - 4 = 3x + 8$</p> <ul style="list-style-type: none"> • A. $x = 3$ • B. $x = 1$ • C. $x = 2$ • D. $x = 4$ 	<p>17. Multiply $(3x - 2)(x + 5)$.</p> <ul style="list-style-type: none"> • A. $3x^2 + 13x - 10$ • B. $3x^2 + 15x - 10$ • C. $3x^2 + 13x + 10$ • D. $3x^2 - 13x - 10$ 	<p>11. What is the sum of $(4x^2 + 3x + 2) + (2x^2 - x + 5)$?</p> <ul style="list-style-type: none"> • A. $6x^2 + 2x + 7$ • B. $6x^2 + 4x + 7$ • C. $2x^2 + 2x + 7$ • D. $6x^2 + 2x - 3$
<p>18. Find the product: $(x - 4)(x - 3)$.</p> <ul style="list-style-type: none"> • A. $x^2 - 7x + 12$ • B. $x^2 - x + 12$ • C. $x^2 - 12x + 7$ • D. $x^2 - 7x - 12$ 	<p>22. Expand and simplify: $(x + 9)(x - 9)$.</p> <ul style="list-style-type: none"> • A. $x^2 - 81$ • B. $x^2 + 81$ • C. $x^2 - 18x + 81$ • D. $x^2 + 18x - 81$ 	<p>14. Find the result when $(3x^2 - 5x + 4)$ is subtracted from $(7x^2 + x - 2)$.</p> <ul style="list-style-type: none"> • A. $4x^2 + 6x - 6$ • B. $10x^2 - 4x + 2$ • C. $4x^2 - 4x - 6$ • D. $10x^2 + 6x - 6$ 	<p>12. Subtract $(x^2 - 4x + 3)$ from $(5x^2 + 2x - 1)$.</p> <ul style="list-style-type: none"> • A. $4x^2 + 6x - 4$ • B. $6x^2 - 2x + 2$ • C. $4x^2 - 2x + 4$ • D. $5x^2 + 6x - 4$
<p>21. Which of the following is the product of $(3x - 2)(3x + 2)$?</p> <ul style="list-style-type: none"> • A. $9x^2 - 4$ • B. $9x^2 + 4$ • C. $6x^2 - 4$ • D. $9x^2 - 12x + 4$ 	<p>23. If $(x + 5)^2 = x^2 + bx + 25$, what is b?</p> <ul style="list-style-type: none"> • A. 25 • B. 10 • C. 5 • D. 20 	<p>25. Which expression is equivalent to $6(a - 4)$?</p> <ul style="list-style-type: none"> • A. $6a - 24$ • B. $6a - 4$ • C. $a - 24$ • D. $6a + 24$ 	<p>13. What is $(2x^2 + x - 3) + (5x^2 - 2x + 7)$?</p> <ul style="list-style-type: none"> • A. $7x^2 - x + 4$ • B. $7x^2 + 3x + 4$ • C. $3x^2 - x + 10$ • D. $7x^2 - x - 4$
<p>24. Apply the distributive property to $5(x + 7)$.</p> <ul style="list-style-type: none"> • A. $5x + 35$ • B. $5x + 7$ • C. $x + 35$ • D. $12x$ 	<p>27. Solve by factoring: $x^2 - 9x + 20 = 0$</p> <ul style="list-style-type: none"> • A. $x = 4$ or $x = 5$ • B. $x = 2$ or $x = 10$ • C. $x = -4$ or $x = -5$ • D. $x = 1$ or $x = 20$ 	<p>20. What is the expanded form of $(x + 6)^2$?</p> <ul style="list-style-type: none"> • A. $x^2 + 12x + 36$ • B. $x^2 + 6x + 36$ • C. $x^2 + 36$ • D. $x^2 + 6x + 6$ 	<p>15. What is the sum of $(8x^2 - 3x) + (-2x^2 + 7x + 1)$?</p> <ul style="list-style-type: none"> • A. $6x^2 + 4x + 1$ • B. $10x^2 + 4x + 1$ • C. $6x^2 - 10x + 1$ • D. $6x^2 + 10x + 1$
<p>26. Factor and solve: $x^2 + 7x + 12 = 0$</p> <ul style="list-style-type: none"> • A. $x = -3$ or $x = -4$ • B. $x = 3$ or $x = 4$ • C. $x = -12$ or $x = 1$ • D. $x = 12$ or $x = -1$ 	<p>30. Factor and solve: $x^2 + x - 12 = 0$</p> <ul style="list-style-type: none"> • A. $x = 3$ or $x = -4$ • B. $x = -3$ or $x = 4$ • C. $x = 12$ or $x = -1$ • D. $x = -12$ or $x = 1$ 	<p>29. Solve: $x^2 - 6x - 16 = 0$</p> <ul style="list-style-type: none"> • A. $x = 8$ or $x = -2$ • B. $x = -8$ or $x = 2$ • C. $x = 4$ or $x = -4$ • D. $x = 16$ or $x = -1$ 	<p>16. What is the product of $(x + 4)(x + 3)$?</p> <ul style="list-style-type: none"> • A. $x^2 + 7x + 12$ • B. $x^2 + 12x + 7$ • C. $x^2 + 7x + 7$ • D. $x^2 + 12$
<p>31. A bakery sells boxes of cookies. Each box contains 6 cookies, and each cookie costs 2 dollars. Write an expression for the total cost of 4 boxes, and find the total cost.</p> <ul style="list-style-type: none"> • A. 12 • B. 24 • C. 36 • D. 48 	<p>28. Which of the following is the correct factorization of $x^2 + 9x + 20$?</p> <ul style="list-style-type: none"> • A. $(x + 4)(x + 5)$ • B. $(x + 2)(x + 10)$ • C. $(x + 1)(x + 20)$ • D. $(x - 4)(x - 5)$ 	<p>19. What is the result of multiplying $(2x)(x^2 - 3x + 4)$?</p> <ul style="list-style-type: none"> • A. $2x^3 - 6x^2 + 8x$ • B. $2x^2 - 6x + 8$ • C. $2x^3 - 3x^2 + 4x$ • D. $2x^3 - 6x^2 + 4x$ 	<p>A rectangular playground has a length that is 4 m greater than its width. The area of the playground is 96 m². Answer the following questions:</p> <p>A. Define a variable. $L =$ _____, $w =$ _____</p> <p>B. Create a quadratic equation. $x^2 +$ _____</p> <p>C. Solve the equation by factoring. $x =$ _____ or $x =$ _____</p> <p>D. Find the dimensions of the playground.</p>