

Algebra 1

Unit 9 Review

Name _____

Date _____ Period _____

Solve the following quadratic equations using any method. Then, identify your method and give a brief explanation for choosing the method. If the equation cannot be solved, write "No Real Solution."

1. $x^2 - 225 = 0$

1. _____

Method:

Reason:

2. $x^2 + 25 = 0$

2. _____

Method:

Reason:

3. $4x^2 - 4x = 24$

3. _____

Method:

Reason:

4. $2x^2 - 7x + 3 = 0$

4. _____

Method:

Reason:

5. Solve by "Completing the Square" $x^2 + 12x + 13 = 0$

5. _____

6. Solve by using the Quadratic Formula: $x^2 + 12x = -13$

6. _____

Algebra 1

Unit 10 Review

Name _____

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Write all answers in simplified form

1. Simplify: $(2x^2 - 8x + 4) + (-5x^4 - 2x^2 + 8)$.

1. _____

2. Simplify: $(4z^3 + 5z^2 + 3) - (z^3 - 2z - 8)$

2. _____

3. Simplify the expression: $-3x^2(4x^2 - 3x + 7)$

3. _____

4. Simplify the expression: $(2x - 5)(3x + 4)$

4. _____

5. Simplify the expression: $(2x + 3)(4x^2 - 7x + 2)$

5. _____

6. Simplify the expression: $(6x + 5)(6x - 5)$

6. _____

For factoring problems, if an expression cannot be factored, write "Prime"

7. Factor the expression: $x^2 - 121$ 7. _____

8. Factor the expression: $3x^2 - 87x + 300$ 8. _____

9. Factor the expression: $5x^2 + 32$ 9. _____

10. Factor the expression: $3x^2 - 14x - 5$ 10. _____

11. Factor the expression: $9x^2 - 45x + 54$ 11. _____

12. Draw an area model below to show the multiplication of: $(3x - 4)(2x + 3)$

Algebra 1

Unit 11 Review

Name _____

Date _____ Period _____

Write all answers in reduced/simplified form

1. Identify the domain of: $\frac{6}{x^2 - x - 6}$. 1. _____

2. Reduce to lowest terms: $\frac{17}{63} \div \frac{51}{189}$ 2. _____

3. Simplify the expression: $\frac{x-4}{x^2-16}$ 3. _____

4. Simplify the expression: $\frac{x^2+3x-28}{4x+28}$ 4. _____

5. Simplify the expression: $\frac{5x^2-5}{x^2-3x+2} \cdot \frac{x^2-4}{5x^2+15x+10}$ 5. _____

6. Simplify the expression: $\frac{4x-8}{12x} \div \frac{x-2}{18x^3}$ 6. _____