

keep scrolling to get a sneak peak!

This set of guided notes will walk Algebra 2 students through how to solve quadratic equations by graphing. All you need to do is print & make copies for your students!

SOLVING QUADRATIC EQUATIONS BY GRAPHING

Algebra 2 Guided Notes

Directions: Solve the equation by graphing. Check with your graphing calculator.

Real Solutions	One Real Solution	No Real Solution

1. $-x^2 + 2x + 3 = 0$
Solution(s): $X = -1, 3$

2. $3x^2 = 6x - 3$
Solution(s): $X = 1$

3. $-8 = -x^2 - 4$

4. $3x = \frac{1}{4}x^2 + 5$

Math with Ms. Rivera

Answer key included

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why do you need this?



It's simple and done-for-you! Just print and make copies!



Students can work on essential Algebra 2 skills.



Aligns to CCSS, TEKs, and VA SOLs!



Suggested and detailed answer keys are included for you!

Algebra 2 Guided Notes Solving Quadratic Equations By Graphing

SOLVING QUADRATIC EQUATIONS BY GRAPHING

Root of an Equation	
How to Solve by Graphing	Make sure the equation is set equal to _____ Graph the quadratic equation on the _____ and see where it intersects the _____ This method is BEST used when you _____
Two Real Solutions	One Real Solution
Directions: Solve the equation by graphing. Check with your _____ $x^2 + 2x - 8 = 0$	

SOLVING QUADRATIC EQUATIONS BY GRAPHING

Directions: Solve the equation by graphing. Check with your graphing calculator!

- $-x^2 + 2x + 3 = 0$

Solution(s): _____
- $3x^2 = 6x - 3$

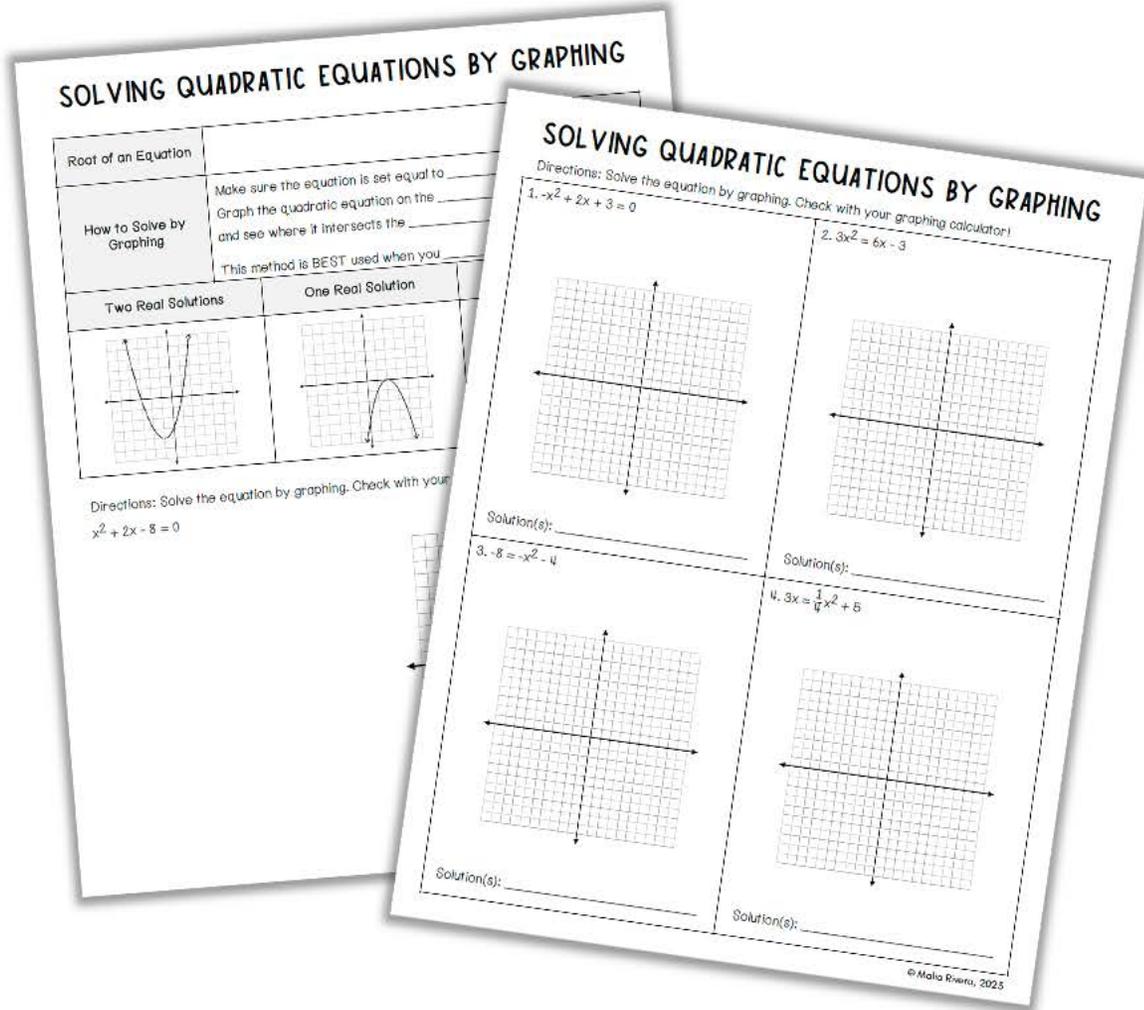
Solution(s): _____
- $-8 = -x^2 - 4$

Solution(s): _____
- $3x = \frac{1}{4}x^2 + 5$

Solution(s): _____

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Algebra 2 Guided Notes: Solving Quadratic Equations by Graphing *includes:*



- ✓ 2 page of guided notes
- ✓ Steps to Solve a Quadratic by Graphing
- ✓ Multiple Solutions on a Graph

Algebra 2 Guided Notes: Solving Quadratic Equations by Graphing *includes:*

✓ Detailed answer keys

CCSS: HSF-IF.C.7

TEKS: A1.7.B

VA SOLs: EI.A1.4.b

SOLVING QUADRATIC EQUATIONS BY GRAPHING

Root of an Equation	a solution to the equation. aka "x-intercepts" "solutions" "zeros of the function"
How to Solve by Graphing	Make sure the equation is set equal to zero Graph the quadratic equation and see where it intersects the x-axis This method is BEST used with... plane
Two Real Solutions	One Real Solution

Directions: Solve the equation by graphing. Check with your graphing calculator!

1. $-x^2 + 2x + 3 = 0$

Solution(s): $X = -1, 3$

2. $3x^2 = 6x - 3$

Solution(s): $X = 1$

3. $-8 = -x^2 - 4$

Solution(s): $X = -2, 2$

4. $3x = \frac{1}{4}x^2 + 5$

Roots/Solutions/x-ints
 $X = -4, X = 2$

Check out what *other teachers* are saying:



"This was great practice for my Algebra II students after I presented the lesson. Next Year, I may use them as notes."

- Vonda B.



"Great resource for what we were currently covering in precalc!"

- Megan M.



"I used this in conjunction with another document, but this would have worked fine on its own. The students found it much easier to understand the concept using these guided notes."

- Cheryl W.

Check out the *year-long bundle!*

ALGEBRA 2 GUIDED NOTES Year-Long Bundle

TRANSFORMATIONS OF FUNCTIONS

Type of Transformation	$f(x)$ Notation
Reflection	$-f(x)$
Vertical Dilation	$af(x)$ $0 < a < 1$ $ a > 1$
Horizontal Dilation	$f(bx)$ $0 < b < 1$ $ b > 1$
Vertical Translation	$f(x) + k$

LINEAR REGRESSION

SCATTER PLOT
Definition: A graph of _____ points that are _____

SCATTER PLOT RELATIONSHIPS

LINE OF BEST FIT
Definition: A line that _____ as close as possible to all _____

LINEAR REGRESSION
Definition: A linear model that is used to _____ between two variables.

LINEAR INTERSECTIONS
Estimating Slope: _____
Slope: _____
Y-intercept: _____

GRAPHING QUADRATIC TRANSFORMS

Reflection over the x-axis: _____

COMPOSITION OF FUNCTIONS

Definition: To make the _____ another function.

Things to remember:

- Always start with the _____ the function on the _____
- Tag does not always equal _____

$(f \circ g)(x) = \dots$ is _____

$g(x) = 2x + 3$ and $f(x) = x^2$, find $(f \circ g)(x)$

COMPOUND INEQUALITIES

Compound inequality has two separate inequalities joined by _____

Graph of a compound inequality with "and" is the _____ of the graphs of the inequalities.

$x > 3$

POLYNOMIAL FUNCTION CHARACTERISTICS

Multiplicities	Touch	Inflection

RELATIVE EXTREMA (Minimum or Maximum)
Points on the graph that help to describe the _____ of a function. They are also called _____ or _____.

INCREASING INTERVALS
The interval between _____ y-values as the x-value _____.

DECREASING INTERVALS
The interval between _____ y-values as the x-value _____.

POSITIVE INTERVALS
Intervals where _____

PROPERTIES OF RATIONAL EXPONENTS & RADICALS

Property	Properties of Rational Exponents
Product of Powers	Definition: _____
Power of a Power	_____
Power of a Product	_____
Negative Exponent	_____
Zero Exponent	_____
Quotient of Powers	_____
Power of a Quotient	_____

Directions: Use the properties of rational exponents to simplify: $1. (y^{1/2} \cdot y^{1/3})^2$

ANSWER KEY INCLUDED



Math with Ms. Rivera



hey there!

My name is Malia and I'm passionate about making learning and practicing math fun. I love creating engaging math resources for my students and I hope your students enjoy these Solving Quadratic Equations by Graphing guided notes for Algebra 2 that can be used all year long!

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