

keep scrolling to get a sneak peak!

This set of guided notes will walk Algebra 2 students through graphing quadratic functions in standard form. All you need to do is print & make copies for your students!

GRAPHING IN STANDARD FORM

Algebra 2 Guided Notes

QUADRATICS IN STANDARD FORM

$y = ax^2 + bx + c$

The line that divides a parabola into a mirror image and passes through the vertex is a vertical line at $x = h$.

Function Opening
 $a > 0$ UP $a < 0$ DOWN

Minimum Value or Maximum Value
 $x = -\frac{b}{2a}, f(-\frac{b}{2a})$
minimum = open up
maximum = open down

Increasing & Decreasing Intervals
Parabola opens up
inc: $(-\infty, -\frac{b}{2a})$ dec: $(-\frac{b}{2a}, \infty)$

Directions: Graph $f(x) = 3x^2 - 6x + 1$ by creating a table of values and plotting them on the grid.

x	y

Math with Ms. Rivera

Answer key included

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 Graphing Quadratics in Standard Form

GRAPHING QUADRATICS IN STANDARD FORM

Standard Form	
Axis of Symmetry	
Properties of Standard Form	Vertex: _____ Minimum Value or Maximum Value: _____
Increasing & Decreasing Intervals	

Directions: Graph $f(x) = 3x^2 - 6x + 1$ by creating a table

X	Y

Axis of Symmetry: _____
Vertex: _____
Increasing: _____
Decreasing: _____

GRAPHING QUADRATICS IN STANDARD FORM

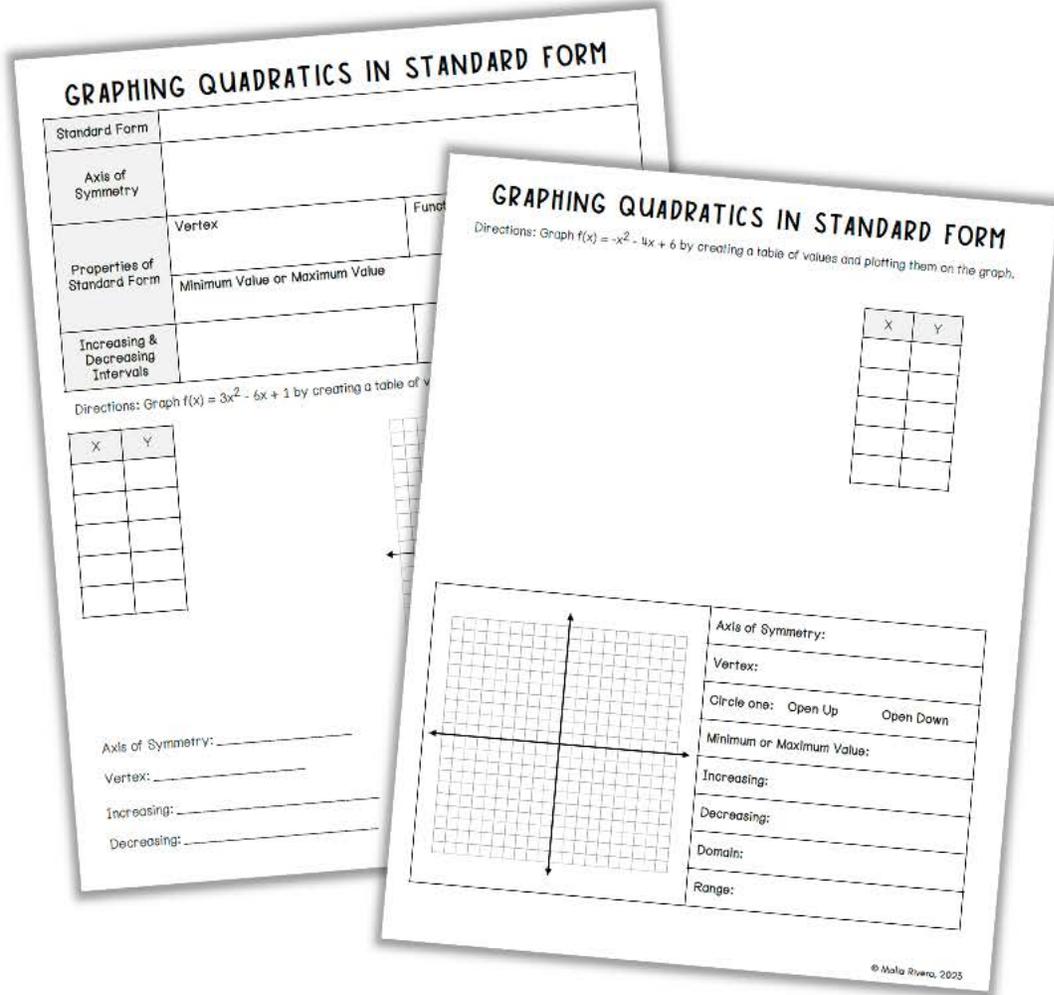
Directions: Graph $f(x) = -x^2 - 4x + 6$ by creating a table of values and plotting them on the graph.

X	Y

Axis of Symmetry: _____
Vertex: _____
Circle one: Open Up Open Down
Minimum or Maximum Value: _____
Increasing: _____
Decreasing: _____
Domain: _____
Range: _____

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Algebra 2 Guided Notes: Graphing Quadratics in Standard Form *includes:*



- ✓ 2 pages of guided notes
- ✓ Definition of Standard Form of a Quadratic
- ✓ Properties of Standard Form
- ✓ Graphing a Quadratic Using Tables

Algebra 2 Guided Notes: Graphing Quadratics in Standard Form *includes:*

 Detailed answer keys

CCSS: HSA-CED.A.2, HSF-IF.C.7

TEKS: A1.7.A

VA SOLs: F.A.7.bf

GRAPHING QUADRATICS IN STANDARD FORM

Standard Form: $y = ax^2 + bx + c$

Axis of Symmetry: a line that divides a parabola into a mirror image and passes through the vertex. It is a vertical line at $x = h$

Properties of Standard Form: Vertex $(-\frac{b}{2a}, f(\frac{-b}{2a}))$

Minimum Value or Maximum Value: $y = f(\frac{-b}{2a})$

Increasing & Decreasing Intervals: Parabola opens up
inc: $(-\frac{b}{2a}, \infty)$ dec: $(-\infty, \frac{-b}{2a})$

Directions: Graph $f(x) = 3x^2 - 6x + 1$ by creating a table

X	Y
-2	25
-1	9
0	1
1	-2
2	1

Axis of Symmetry: $x = 1$

Vertex: $(1, -2)$

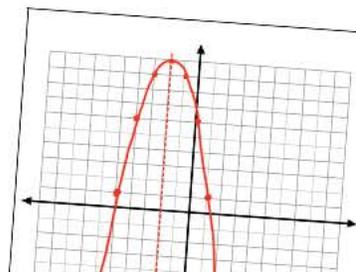
Increasing: $(1, \infty)$

Decreasing: $(-\infty, 1)$

GRAPHING QUADRATICS IN STANDARD FORM

Directions: Graph $f(x) = -x^2 - 4x + 6$ by creating a table of values and plotting them on the graph.

X	Y
-4	6
-3	9
-2	10
-1	9
0	6



Axis of Symmetry: $x = -2$

Vertex: $(-2, 10)$

Circle one: Open Up Open Down

Minimum or Maximum Value: $y = 10$

Increasing: $(-\infty, -2)$

Check out what *other teachers* are saying:



"Great material! Thanks for making my life so much easier."

- Nancy Beach (TPT Seller)



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

- Megan M.



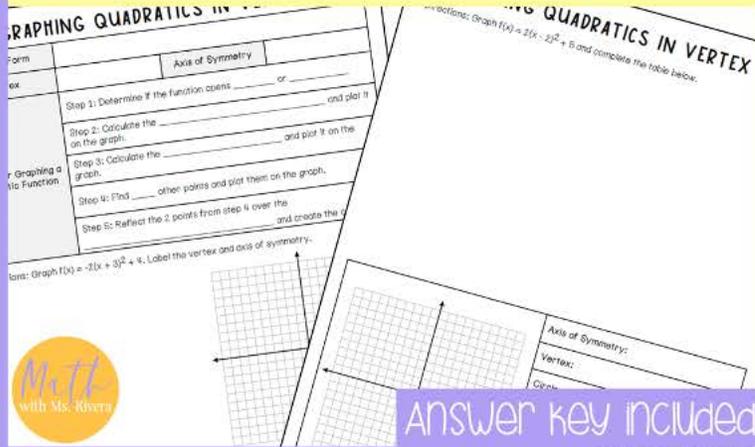
"I used this in conjunction with another document, but this would have worked fine on its own. The students found it much easier to understand the concept using these guided notes."

- Cheryl W.

You may also enjoy ...

GRAPHING IN VERTEX FORM

Algebra 2 Guided Notes

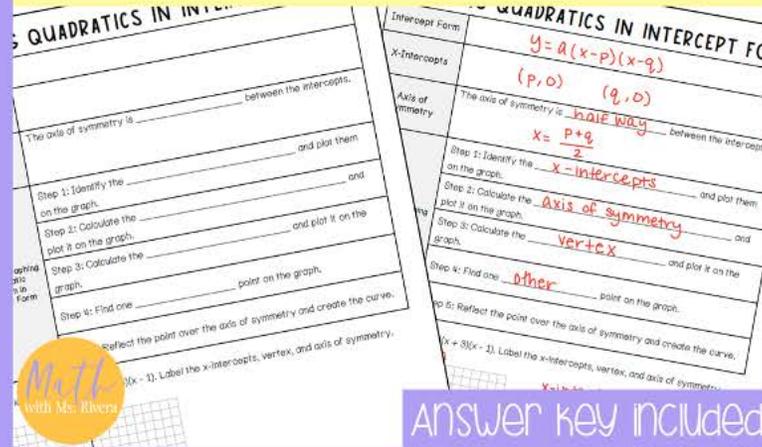


Answer key included

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GRAPHING IN INTERCEPT FORM

Algebra 2 Guided Notes

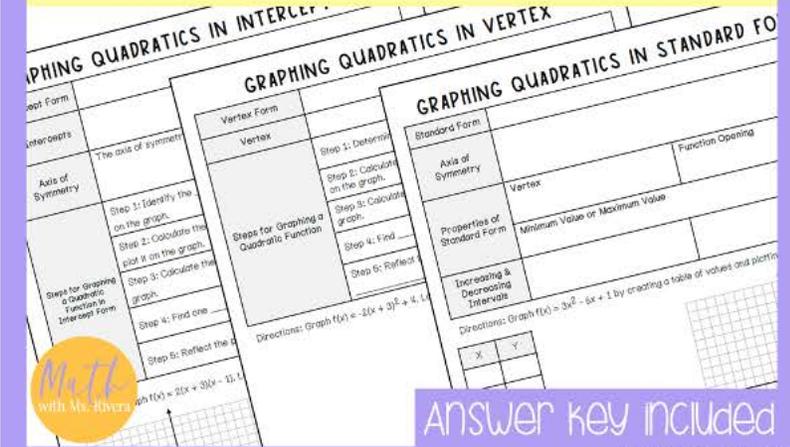


Answer key included

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GRAPHING QUADRATIC FUNCTIONS

Algebra 2 Guided Notes



Answer key included

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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 also _____

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

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

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.

$x > -8$

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



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 Graphing Quadratics in Standard Form guided notes for Algebra 2 that can be used all year long!

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