

keep scrolling to
get a sneak peek!

Help your Algebra students review quadratic function skills with these March Mathness review stations! Students will be eager to get the self-checking & student choice benefits from these activities!

QUADRATIC FUNCTIONS REVIEW

MARCH MATH-NESS STATIONS

STATION 2: DRIBBLE, DRIBBLE, SHOOT!

Directions: Start with any question you'd like and answer it. Once you find the answer, then write the letter in the long box below.

1. What is the vertex of $y = x^2 - 4x + 3$?
2. What is the axis of symmetry of $y = 2(x - 1)^2 - 5$?
3. What way does the graph open for $y = -3(x + 2)^2 + 7$?
4. What is the y-intercept of $y = x^2 - 8x + 7$?
5. What is the vertex of $y = -x^2 + 10x$?
6. What is the y-intercept of $y = -5x^2 + 20x - 7$?

STATION 3: FULL COURT GRAPH

Directions: Graph each given function. Record the letter of the basketball that the passes through.

1. $y = x^2 - 4x + 3$
2. $y = 2(x - 1)^2 - 4$
4. $y = -x^2 - 6x - 8$

STATION 4

Solve the quadratic equation by the quadratic formula.

$$2x^2 + 3x - 5 =$$

STATION 8

Solve the quadratic equation by factoring.

$$4x^2 - x - 5 =$$

4 Stations activities + Answer keys

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Why do you need this?

Quadratic Function Review Stations



There are a variety of activities that cover several topics.



Help your students practice these essential math skills.



The activities have self-checking components so students can receive feedback!

STATION 1: SOLVE FOR THE WIN!
Directions: Show your work from each card in the space below. Make sure to record which question number you are working on.

Question # 1 Shot Category: *free throw*
 $x^2 - 5x + 6 = 0$
 $(x-3)(x-2) = 0$
 $x-3=0$ $x-2=0$
 $x=3$ $x=2$

Question # 2 Shot Category: *free throw*
 $x^2 + 7x + 10 = 0$
 $(x+5)(x+2) = 0$
 $x+5=0$ $x+2=0$
 $x=-5$ $x=-2$

Question # 3 Shot Category: *free throw*
 $x^2 + 18x + 81 = 0$
 $(x+9)(x+9) = 0$
 $x+9=0$
 $x=-9$

Question # 4 Shot Category: *free throw*
 $2x^2 - 3x - 5 = 0$
 $(2x-5)(x+1) = 0$
 $2x-5=0$ $x+1=0$
 $x=5/2$ $x=-1$

Question # 5 Shot Category: *free throw*
 $x^2 - 9x + 20 = 0$
 $(x-5)(x-4) = 0$
 $x-5=0$ $x-4=0$
 $x=5$ $x=4$

Question # 6 Shot Category: *free throw*
 $x^2 + 2x - 15 = 0$

STATION 2: DRIZZLE, DRIZZLE, SHOOT!
Directions: Start with any question you'd like and answer it. Once you find the answer, then write the letter in the long box below.

What is the vertex of $y = x^2 - 4x + 3$? S up O $x = -1$

What is the axis of symmetry of $y = 2(x-1)^2 - 5$? C $(0, 7)$ P $x = 1$

What way does the graph open for $y = -3(x+2)^2 + 7$? U $(7, 0)$ I $(0, -7)$

What is the y-intercept of $y = x^2 - 8x + 7$? N $(2, -1)$ H min

What is the vertex of $y = -x^2 + 10x$? R max A down

Is there a minimum or maximum value of $y = 1/3x^2 - 13x + 6$?

STATION 3: FULL COURT
Directions: Graph each given function. Record the letter through.

1. $y = x^2 - 4x + 3$

2. Solve the equation by square roots: $x^2 = 16$

3. $y = -3(x+2)^2 + 5$

STATION 4: MARCH MATHNESS
Directions: Show your work from each question in the space below.

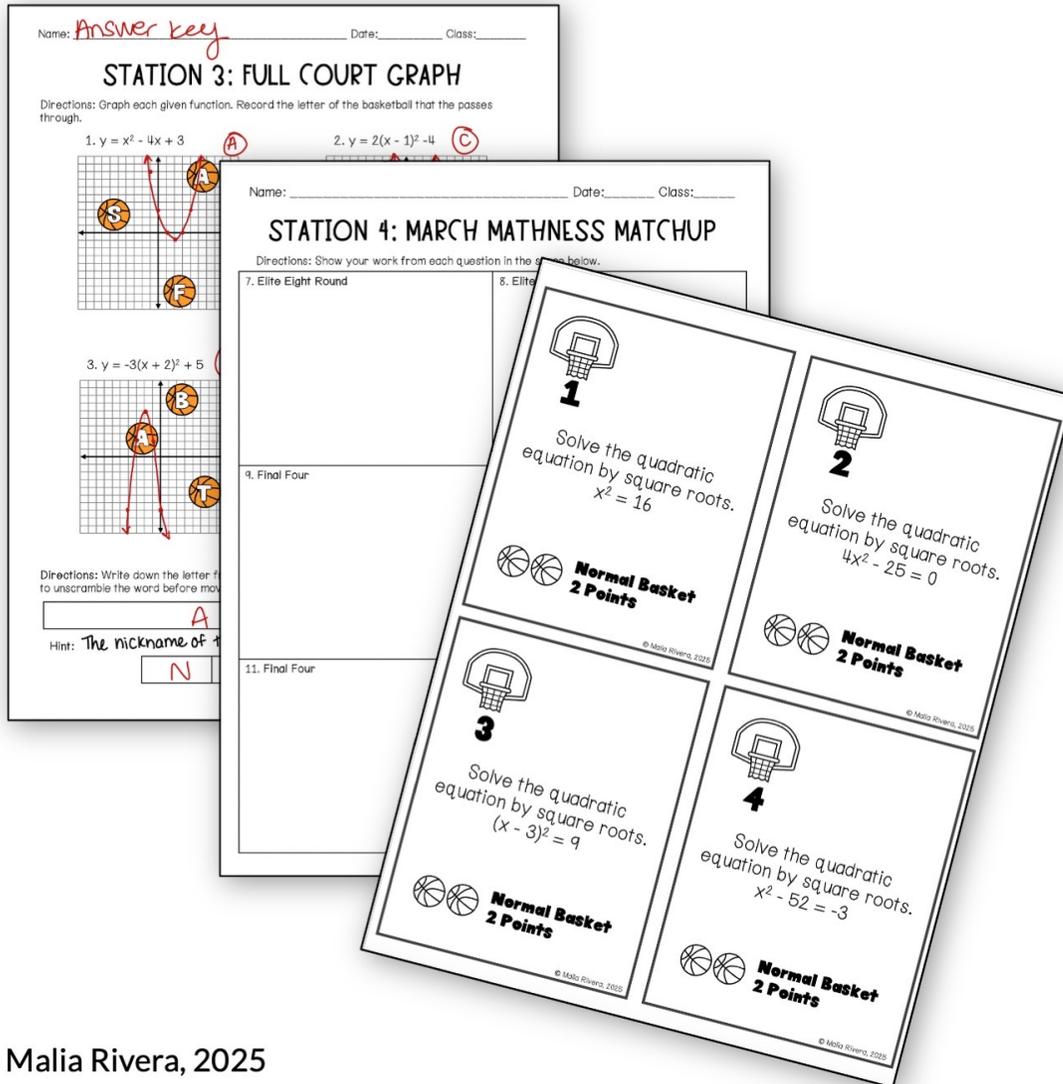
14. Championship Round
 $-3x^2 + 20x + 48$
 $(-3x+4)(x+8)$

13. Championship Round
 $18x^3 - 17$
 $2x(9x^2 - 2x)$

CHAMP

Answer key

Quadratic Function March Mathness Review Stations *includes:*



- ✓ 4 printable station activities
- ✓ answer keys
- ✓ teacher & student directions
- ✓ color & printer-friendly versions

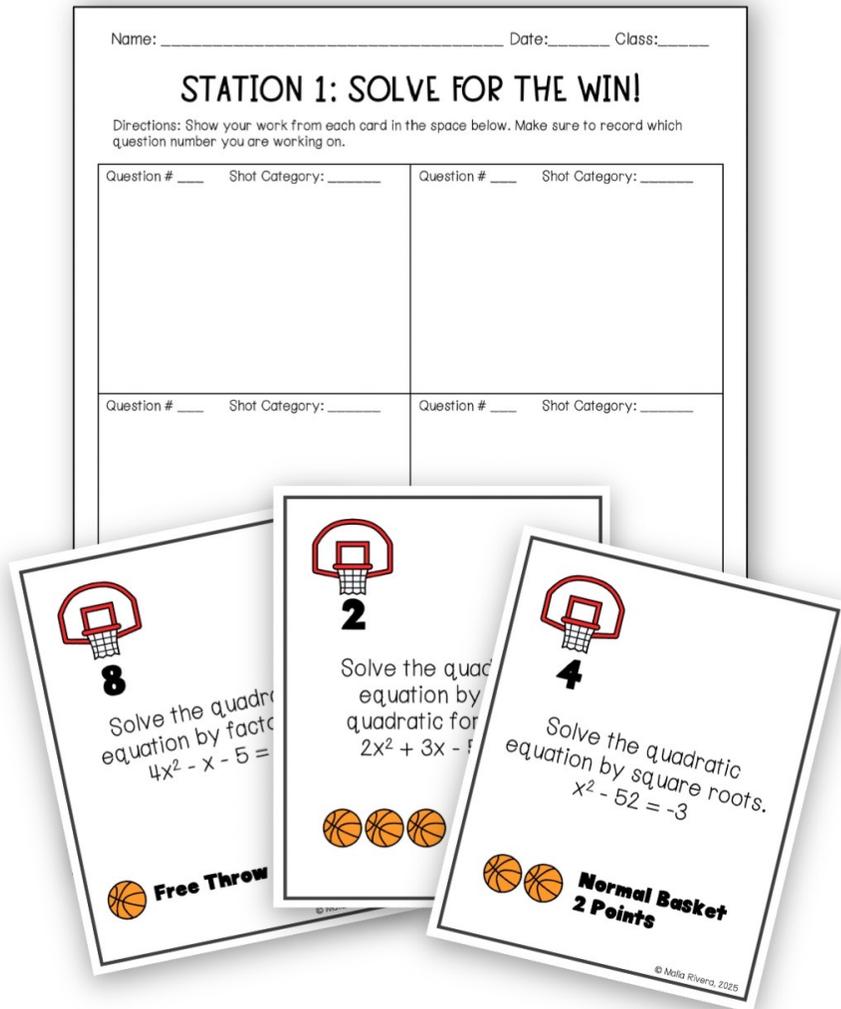
station 1 - Solving for the Win!

Skill: Solving Quadratic Equations (*by factoring, square roots & quadratic formula*)

Students are required to answer 2 questions from each of the 3 shot types. Then they can choose whatever other questions they want to answer to get at least 24 points.

Includes:

- 24 total task cards, 8 questions per shot type (*free throw, normal basket, 3-pointer*)
- Recording sheets
- Detailed answer key



station 2 - Dribble Dribble Shoot!

Name: Answer Key Date: _____ Class: _____

STATION 2: DRIBBLE, DRIBBLE, SHOOT!

Directions: Show your work from each question in the space below.

1. Vertex of $y = x^2 - 4x + 3$ $x = -\left(\frac{-b}{2a}\right) = 2$ $y = (2)^2 - 4(2) + 3$ $y = 4 - 8 + 3$ $y = -1$ (2, -1) N P	2. AOS
3. $y = -3(x + 2)^2 + 7$ opens down because the coefficient "a" is negative. A C	4. $y = -3(x + 2)^2 + 7$
5. Vertex of $y = -x^2 - 10x$ $x = -\left(\frac{-b}{2a}\right) = -5$ $y = -(-5)^2 - 10(-5)$ $y = -25 + 50$ $y = 25$ (-5, 25) M	6.
7. $y = 13x^2 - 11x + 6$ has a minimum because "a" is positive and opens up ↙ min	

STATION 2: DRIBBLE, DRIBBLE, SHOOT!

Directions: Start with any question you'd like and answer it. Once you find the answer, then write the letter in the long box below.

- What is the vertex of $y = x^2 - 4x + 3$? **(2, -1)**
- What is the axis of symmetry of $y = 2(x - 1)^2 - 8$? **x = -1**
- What way does the graph open for $y = -3(x + 2)^2 + 7$? **down**
- What is the y-intercept of $y = x^2 - 8x + 7$? **(0, 7)**
- What is the vertex of $y = -x^2 + 10x$? **(5, 25)**
- What is the y-intercept of $y = -5x^2 + 20x - 7$? **(0, -7)**
- Is there a minimum or maximum value of $y = 13x^2 - 11x + 6$? **min**
- What is the axis of symmetry of $y = -8x^2 - 16x - 9$? **x = 2**

Directions: Write down the letter from each correct answer in the space below. Use the hint to unscramble the word before moving on to the next station.

Hint: Winners of the March Madness tournament.

SECRET WORD:

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Skill: Characteristics of Quadratic Functions (Axis of Symmetry, Vertex, Max/Min, etc.)

Students will answer the basketball question and match it to the correct answer hoop. Then they will record the letters under the hoop in the box at the bottom. Given the hint, students will unscramble the letters to reveal a secret word.

Includes:

- 8 questions
- Recording sheet
- Detailed answer key

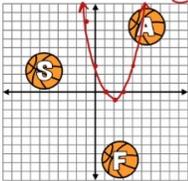
station 3 - Full Court Graph!

Name: Answer key Date: _____ Class: _____

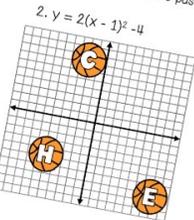
STATION 3: FULL COURT GRAPH

Directions: Graph each given function. Record the letter of the basketball that the graph passes through.

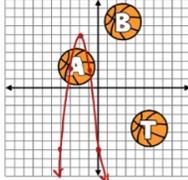
1. $y = x^2 - 4x + 3$ (A)



2. $y = 2(x - 1)^2 - 4$



3. $y = -3(x + 2)^2 + 5$ (H)



Directions: Write down the letter from each correct answer in the space below. Use the hint to unscramble the word before moving on to the next station.

Hint: The nickname of the hosts of the March Madness basketball tournament.

A C

N C

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Skill: Graphing Quadratic Functions

Given the quadratic function, students will graph it on the coordinate plane. Their graph will go through one of the letter basketballs. If it goes through a letter, they will record it. At the end, using the hint, students will unscramble the letters to reveal a mystery word.

Includes:

- 4 questions
- Detailed answer key

station 4 - March Mathness Matchup

Name: _____ Date: _____ Class: _____

STATION 4: MARCH MATHNESS MATCHUP

Directions: Show your work from each question in the space below.

1. Elite Eight Round

2. Elite Eight Round

3. Elite Eight Round

5. Elite Eight Round

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Directions: Completely factor each quadratic function. Check your answers before moving on to the next round. If your answer is incorrect, try again.

STATION 4: MARCH MATHNESS MATCHUP

Name: _____ Date: _____ Class: _____

Elite Eight

Final Four

Championship

$x^2 - 7x + 10$
 $(x - 5)(x - 2)$

$x^2 + 5x - 14$
 $(x + 7)(x - 2)$

$x^2 - 3x - 10$
 $(x + 2)(x - 5)$

$x^2 + 2x - 8$
 $(x + 4)(x - 2)$

$x^2 - 3x - 18$
 $(x - 6)(x + 3)$

$x^2 - 16$
 $(x - 4)(x + 4)$

$x^2 + 6x + 9$
 $(x + 3)^2$

$x^2 - 12x + 36$
 $(x - 6)^2$

$4x^2 - 10x + 6$
 $2(2x - 3)(x - 1)$

$-5x^2 - 7x + 6$
 $-(5x - 3)(x + 2)$

$-3x^2 + 20x + 48$
 $-(3x + 4)(x - 8)$

$6x^2 - 9x - 10$
 $(3x + 2)(2x - 5)$

$-24x^2 - 30x + 9$
 $-3(2x + 3)(4x - 1)$

$18x^3 - 12x^2 + 2x$
 $2x(3x - 1)(3x - 1)$

Skill: Factoring Quadratics

Given the quadratic expressions, students will completely factor. An answer key is included so they can check their answers before moving on to the next round.

Includes:

- 14 questions
- Recording sheet
- Detailed answer key

Rational Functions Review Stations

standards covered:

CCSS: HSA-REI.B.4ab, HSA-SSE.B.3a,
HSF-IF.C.7a, HSF-IF.C.8a

TEKs: A1.7.A, A1.7.B, A1.8.A, A2.4.F

VA SOLs: EO.A.2.c, EI.A.4.b, EI.A.6.c,
F.A.7.d

STATION 4: MARCH MATHNESS MATCH UP

Directions:

In this station, you will answer problems in each round of the bracket. If you get the answer incorrect, you must go back and try again. Once you get all the questions correct in that round, you can move on to the next round.

Instructions:

- Start by answering the questions in the Elite Eight round. Make sure to show your work.
- Check each answer before moving on to the next round. If there are incorrect answers, go back and try again.
- Once every question in the round is complete & correct, you can move on to the next round.

2
Solve the quadratic equation by the quadratic formula.
 $2x^2 + 3x - 5 =$

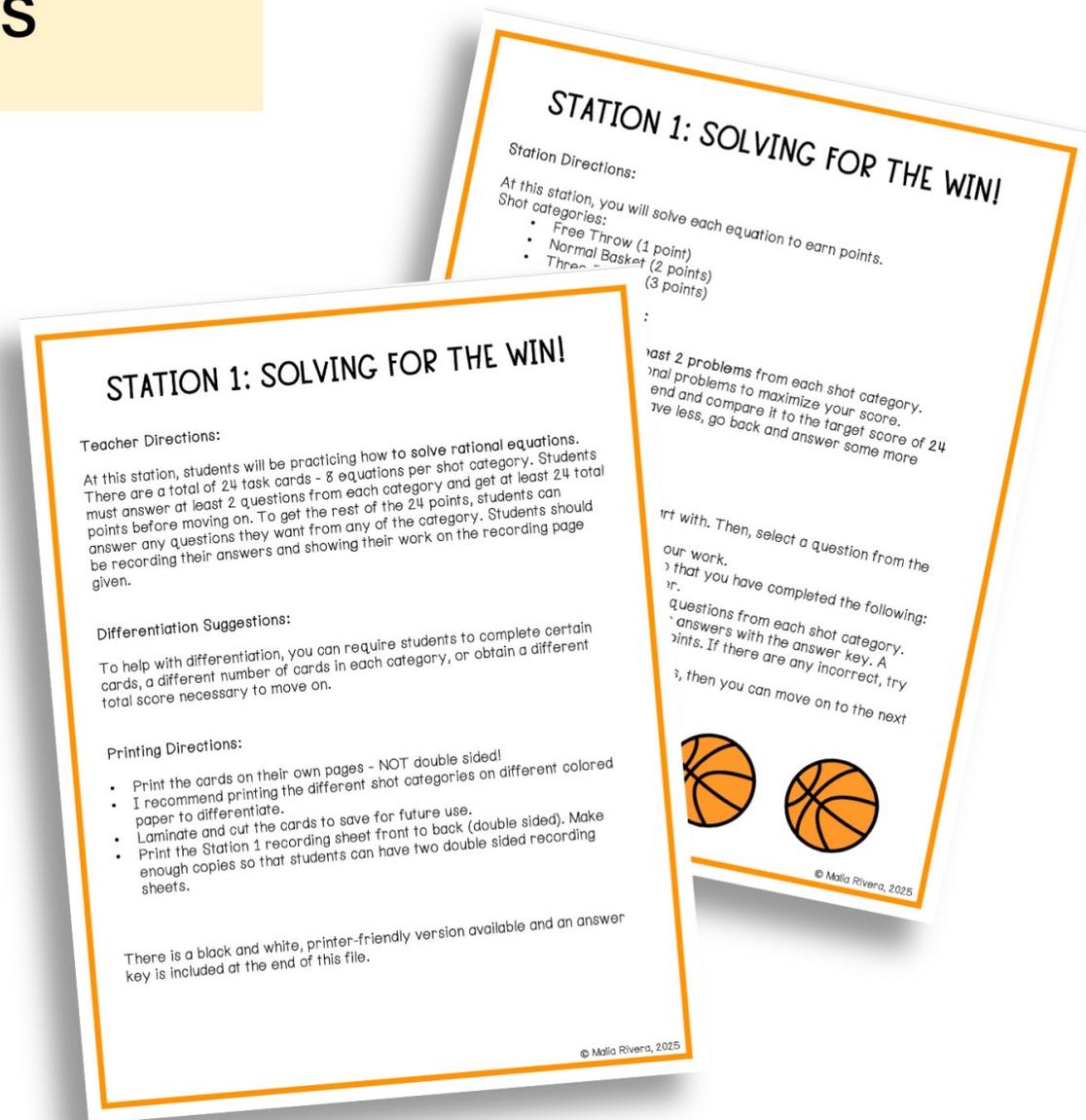
8
Solve the quadratic equation by factoring.
 $4x^2 - x - 5 = 0$

Free Throw - 1 point

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March Mathness Review Stations

Teacher and printing directions included. Student directions to be printed at each station are also included!



how to use this resource

STATION 2: DRIBBLE, DRIBBLE, SHOOT!
Directions: Start with any question you'd like and answer it. Once you find the answer, then write the letter in the long box below.

What is the vertex of $y = x^2 - 4x + 3$? **S**
What is the axis of symmetry of $y = 2(x - 1)^2 - 5$? **C**
What way does the graph open for $y = -3(x + 2)^2 + 7$? **U**
What is the y-intercept of $y = x^2 - 8x + 7$? **U**
What is the vertex of $y = -x^2 + 10x - 16$? **U**
What is the value of x when $y = -5x^2 - 20x + 15$? **U**
Is there a value of x when $y = 5x^2 - 10x + 5$? **U**
What is the value of x when $y = 5x^2 - 10x + 5$? **U**

STATION 1: SOLVE FOR THE WIN!
Directions: Show your work from each card in the space below. Make sure to mark which question number you are working on.

Question # 5 Shot Category: **Normal Basketball**
 $(x-4)^2 - 25 = 0$
 $+25 +25$
 $\sqrt{(x-4)^2} = \sqrt{25}$
 $x-4 = \pm 5$
 $x-4=5$ $x-4=-5$
 $+4 +4$ $+4 +4$
X=9 **X=-1**

Question # 6 Shot Category: **Normal Basketball**
 $2(x+1)^2 - 18 = 0$
 $+18 +18$
 $2(x+1)^2 = 18$
 $\sqrt{2(x+1)^2} = \sqrt{9}$
 $x+1 = \pm 3$ $x+1 = -3$
X=2 **X=-4**

Question # 7 Shot Category: **Normal Basketball**
 $5(x-2)^2 = 80$
 $\sqrt{5(x-2)^2} = \sqrt{16}$

Question # 8 Shot Category: **Normal Basketball**
 $3(x+1)^2 - 20 = 7$
 $+20 +20$
 $(x+1)^2 = 27$
 $\sqrt{(x+1)^2} = \sqrt{27}$
 $x+1 = \pm 3\sqrt{3}$
 $x+1 = -3$
X=-4

STATION 4: MARCH MATHESS MATCHUP
Directions: Completely factor each quadratic function. Check your answers before moving on to the next round. If your answer is incorrect, try again.

Elite Eight: $x^2 - 12x + 36$ ($x-6$)²
Final Four: $-24x^2 - 30x + 9$ ($-3(2x+3)(4x-1)$)
Championship: $18x^3 - 12x^2 + 2x$ $2x(3x-1)(3x-1)$
Trophy: $-3x^2 + 20x + 48$ $-(3x+4)(x-8)$

Elite Eight: $x^2 - 7x + 10$ ($x-5$)($x-2$)
Final Four: $4x^2 - 10x + 6$ $2(2x-3)(x-1)$
Championship: $x^2 + 5x - 14$ ($x+7$)($x-2$)
Trophy: $x^2 - 3x - 10$ ($x+2$)($x-5$)
Elite Eight: $x^2 + 2x - 8$ ($x+4$)($x-2$)
Final Four: $x^2 - 3x - 18$ ($x-6$)($x+3$)
Championship: $x^2 - 16$ ($x-4$)($x+4$)
Trophy: $x^2 + 6x + 9$ ($x+3$)²

This is a great activity to use when reviewing for an end of unit assessment on **quadratic functions** or as an end of year review.

These stations are also a **substitute-friendly** assignment!

You may also enjoy ...

FINDING THE VERTEX

Color by Number Worksheet

Directions: Find the vertex of each quadratic function. Circle the answer from the given options. Your answers will determine how you color the grid.

1. $f(x) = x^2 - 5x + 17$

2. $f(x) = 3x^2 - 24x + 46$

3. $f(x) = -2x^2 + 8x + 5$

4. $f(x) = x - 5x^2 + 6$

5. $f(x) = 3(x + 3)^2 - 9$

(2, 65)	(4, 1)	(2, 1)	(4, -2)	(-4, 94)
orange	light green	purple	dark green	yellow

Color key: (2, 65) orange, (4, 1) light green, (2, 1) purple, (4, -2) dark green, (-4, 94) yellow.

Answer key included

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FACTORING TRINOMIALS A NOT 1

Digital & Print Activity Pack

3 Activities

1. $25x^2 + 140x + 160$

2. $7x^2 + 57x - 54$

3. $3x^2 - x - 30$

4. $25x^2 + 140x + 160$

5. $2x^2 + 23x + 10$

6. $3x^2 - 20x + 12$

7. $5x^2 - 14x + 8$

8. $6x^2 - 3x - 4$

9. $4x^2 - 3x - 7$

10. $10x^2 + 23x + 12$

11. $30x^2 + 72x + 24$

12. $8x^2 - 13x + 4$

13. $11x^2 - 21x + 10$

14. $4x^2 - 7x - 2$

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QUADRATICS

Digital Activity Bundle

Algebra

Quadratic Graph & Equation Matching Activity

Math with Ms. Rivera

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check it out!

Answer Key
Name: _____ Date: _____
ADDING & SUBTRACTING RATIONAL EXPRESSIONS
Directions: Add or subtract the rational expressions. Show your work.

Solving Systems of Equations
Date: _____
Solve systems of equations using substitution or elimination. Check your solution.
 $2x - 6y = -18$
 $x = 3y - 9$
 $2(3y - 9) - 6y = -18$
 $6y - 18 - 6y = -18$
 $-18 = -18$
infinitely many solutions

ANSWER KEY
Solving Systems of Equations
Date: _____
Solve systems of equations using substitution or elimination. Check your solution.
 $2x - 6y = -18$
 $x = 3y - 9$
 $2(3y - 9) - 6y = -18$
 $6y - 18 - 6y = -18$
 $-18 = -18$
infinitely many solutions

Multiplying & Dividing Rational Expressions
Date: _____
Directions: Multiply or divide the rational expressions. Show your work.

Rational Expression Operations - Addition & Subtraction
Directions: Answer each question and type the question number with the matching answer in the answer column to the right.

#	Question	Answer	Type the matching question numbers here
1	$\frac{5}{x} + \frac{3}{x+1}$	$\frac{2x+1}{x+2}$	
2	$\frac{2}{x+4} - \frac{x^2}{x^2-16}$	$-\frac{1}{x^2-1}$	
3	$\frac{x+2}{x^2+4x+4} + \frac{2x}{x+2}$	$\frac{2x^2+2x+5}{x^2+x-2}$	
4	$\frac{x}{x-2} + \frac{3}{x-1}$	$-\frac{x^2+2x-8}{x^2-16}$	
5	$\frac{x}{4x+8} - \frac{1}{x^2+2x}$	$\frac{8x+5}{x^2+1}$	
6	$\frac{x+2}{x-1} + \frac{x-1}{x+2}$	$\frac{x^2-3x+7}{x^2-4}$	
7	$\frac{2x+1}{x^2-4} + \frac{x-3}{x+2}$	$\frac{x^2+2x-6}{x^2-3x+2}$	
8	$\frac{x^2+2x}{x^2-1} - \frac{x+1}{x-1}$	$\frac{x-2}{4x}$	

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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 this activity too!

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