

keep scrolling to
get a sneak peek!

Help your Algebra 2 students
review rational function skills
with these March Mathness
review stations! Students will be
eager to get the self-checking
& student choice benefits from
these activities!

RATIONAL 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.

- $\frac{x^2-4}{x+2} \cdot \frac{x+2}{x-2}$
- $\frac{x}{x^2-x-12} + \frac{5}{x-4}$
- $\frac{x^2-3x}{x-3} \cdot \frac{x^2+x-6}{x}$
- $\frac{x+3}{x^2+5x-14} + \frac{x+7}{x^2+5x+11}$
- $\frac{3x^2}{2x-8} - \frac{48}{2x-8}$
- $\frac{x^2-x-6}{x+4} + (x^2-6x+9)$

Matching Key:
S $\frac{4x^2}{5(x-4)^2}$ O $\frac{3(x+4)}{2}$
C $\frac{2(x+5)}{(x+7)(x-2)}$ P $4/5$
1

STATION 3: FULL COURT GRAPH
Directions: Graph each given rational function. Record the letter of the basketball that the passes through.

- $f(x) = \frac{2}{x-3}$ (Graph passes through A)
- $f(x) = \frac{x+1}{x^2-4}$ (Graph passes through C)

STATION 4: Normal 2 Point
Solve. $\frac{x+5}{x+4} - \frac{3}{x+4}$

STATION 5: Normal 2 Point
Solve. $\frac{x^2-4x}{x^2-2x} + \frac{3x}{x^2-2x} = 1$



4 Stations activities + Answer keys

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Why do you need this?

Rational 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!

The image shows a collage of several math review station worksheets. The worksheets are titled 'STATION 1: Free Throw - 1 point', 'STATION 2: DRIBBLE, DRIBBLE, SHOOT!', 'STATION 3: FULL COURT', 'STATION 4: MARCH MATHNESS MATCHUP', and 'Answer key'. The worksheets contain various rational function problems, including solving equations, graphing functions on a coordinate plane, and simplifying expressions. Some worksheets also include a grid for graphing and a self-checking component where students match answers to letters (A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z).

Rational Function March Mathness Review Stations *includes:*

STATION 3: FULL COURT GRAPH
Directions: Graph each given rational function. Record the letter of the basketball that passes through.

1. $f(x) = \frac{2}{x-3}$

2. $f(x) = \frac{x+1}{x^2-4}$

3. $f(x) = \frac{x^2-11}{x+2}$

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*

$$\frac{x}{x+3} + \frac{2}{x+3} = \frac{5}{x+3}$$
$$x+2 = 5$$
$$-2 \quad -2$$
$$\boxed{x=3}$$

Question # 3 Shot Category: *free throw*

$$\frac{2x+3}{x-2} + \frac{x-1}{x-2} = \frac{4}{x-2}$$
$$2x+3 + x-1 = 4$$
$$3x+4 = 4$$
$$-4 \quad -4$$
$$3x = 0$$
$$\boxed{x=0}$$

Question # 5 Shot Category: *free throw*

$$\frac{5x}{x^2-9} + \frac{3}{x+3} = \frac{7}{x-3}$$
$$\frac{5x}{x^2-9} + \frac{3x-9}{x^2-9} = \frac{7x+21}{x^2-9}$$
$$5x+3x-9 = 7x+21$$
$$8x-9 = 7x+21$$
$$-7x+9 = -7x+21$$
$$\boxed{x=30}$$

Free Throw - 1 point

1

Solve.

$$\frac{x}{x+3} + \frac{2}{x+3} = \frac{5}{x+3}$$

Free Throw - 1 point

2

Solve.

$$\frac{3x}{x+1} - \frac{4}{x+1} = \frac{2}{x+1}$$

Free Throw - 1 point

3

Solve.

$$\frac{2x+3}{x-2} + \frac{x-1}{x-2} = \frac{4}{x-2}$$

Free Throw - 1 point

4

Solve.

$$\frac{x+5}{x+4} - \frac{3}{x+4} = \frac{2}{x+4}$$

Free Throw - 1 point

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

station 1 - Solving for the Win!

The recording sheet is titled "STATION 1: SOLVE FOR THE WIN!" and includes a header for "Name:", "Date:", and "Class:". Below the title are directions: "Directions: Show your work from each card in the space below. Make sure to record which question number you are working on." The sheet is divided into four quadrants, each with a "Question # ____" and "Shot Category: ____" label. In the foreground, three task cards are shown, each with a basketball hoop icon and a shot type label. The first card, labeled "4" and "Free Throw", shows the equation $\frac{x+5}{x+4} - \frac{3}{x+4} =$ and asks to "Solve.". The second card, labeled "6" and "Normal Basket", shows the equation $\frac{2x+4}{x-1} + 2 =$ and asks to "Solve.". The third card, labeled "1" and "3-Pointer", shows the equation $\frac{x^2-4x}{x^2-2x} + \frac{3x}{x^2-2x} = 1$ and asks to "Solve.". Each card also features a basketball icon and a "Points" value (4, 2, and 3 respectively).

Skill: Solving Rational Equations

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!

Skill: Operations on Rational Expressions

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.

Answer Key (Top Worksheet):

- $\frac{x^2-4}{x+2} \cdot \frac{x+2}{x-2} = \frac{(x-2)(x+2)}{x+2} \cdot \frac{x+2}{x-2} = x+2$ (Letter: N)
- $\frac{x}{x-4}$ (Letter: A)
- $\frac{x^2-3x}{x-3} \cdot \frac{x^2+x-6}{x} = \frac{x(x-3)}{x-3} \cdot \frac{(x+3)(x-2)}{x} = (x+3)(x-2)$ (Letter: H)
- $\frac{x^2-3x}{x-3} \cdot \frac{x^2+x-6}{x} = \frac{x(x-3)}{x-3} \cdot \frac{(x+3)(x-2)}{x} = (x+3)(x-2)$ (Letter: C)
- $\frac{3x^2}{2x-8} - \frac{4x}{2x-8} = \frac{3x^2-4x}{2(x-4)} = \frac{x(3x-4)}{2(x-4)} = \frac{3(x-4)(x+4)}{2(x-4)} = \frac{3(x+4)}{2}$ (Letter: O)
- $\frac{3x^2-4x}{2x-8} - \frac{4x}{2x-8} = \frac{3x^2-4x-4x}{2(x-4)} = \frac{3x^2-8x}{2(x-4)} = \frac{x(3x-8)}{2(x-4)}$ (Letter: I)
- $\frac{(x+4)3}{(x+4)(x+4)} - \frac{6}{x+4} \cdot \frac{(x+4)}{(x+4)} = \frac{3x+18-6x-24}{(x+4)(x+4)} = \frac{-3x-6}{(x+4)(x+4)} = \frac{-3(x+2)}{(x+4)(x+4)}$ (Letter: I)
- $\frac{3x^2-4x}{2x-8} - \frac{4x}{2x-8} = \frac{3x^2-4x-4x}{2(x-4)} = \frac{3x^2-8x}{2(x-4)} = \frac{x(3x-8)}{2(x-4)}$ (Letter: I)

Recording Sheet (Bottom Worksheet):

- $\frac{x^2-4}{x+2} \cdot \frac{x+2}{x-2}$ (Letter: N)
- $\frac{x}{x-4}$ (Letter: A)
- $\frac{x^2-3x}{x-3} \cdot \frac{x^2+x-6}{x}$ (Letter: H)
- $\frac{x^2-3x}{x-3} \cdot \frac{x^2+x-6}{x}$ (Letter: C)
- $\frac{x+3}{x^2+5x-14} + \frac{x+7}{x^2+5x-14}$ (Letter: U)
- $\frac{3x^2}{2x-8} - \frac{4x}{2x-8}$ (Letter: N)
- $\frac{3}{x+4} - \frac{6}{x+6}$ (Letter: R)
- $\frac{4x}{5x-20} + \frac{x^2-2x}{x^2-6x+8}$ (Letter: M)

Answer Hoops (Bottom Worksheet):

- $\frac{4x^2}{5(x-4)^2}$ (Letter: S)
- $\frac{3(x+4)}{2}$ (Letter: O)
- $\frac{2(x+5)}{(x+7)(x-2)}$ (Letter: C)
- $\frac{4}{5}$ (Letter: P)
- 1 (Letter: 1)
- $\frac{-3(x+2)}{(x+4)(x-6)}$ (Letter: I)
- $x+2$ (Letter: N)
- $(x+3)(x-2)$ (Letter: H)
- $\frac{1}{(x-2)(x+3)}$ (Letter: R)
- $\frac{3(2x+5)}{(x+3)(x-4)}$ (Letter: A)
- $x-2$ (Letter: T)

Hint: Winners of the March Madness tournament.

Unscrambling Grid:

--	--	--	--	--	--	--	--

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Includes:

- 8 questions
- Recording sheet
- Detailed answer key

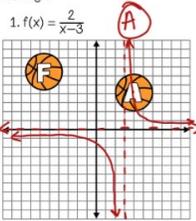
station 3 - Full Court Graph!

Name: Answer key Date: _____ Class: _____

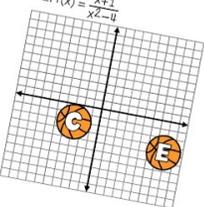
STATION 3: FULL COURT GRAPH

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

1. $f(x) = \frac{2}{x-3}$ **A**

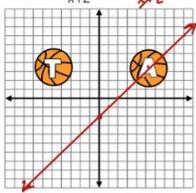


2. $f(x) = \frac{x+1}{x^2-4}$



3. $f(x) = \frac{x^2-4}{x+2} \rightarrow \frac{(x-2)(x+2)}{x+2} = x-2$ **A**

linear!



Directions: Write down the letter from each graph to unscramble the word before moving on to the next station.

A C

Hint: The abbreviated name for the coach is _____

N C

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Skill: Graphing Rational Functions

Given the rational 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

Directions: Simplify each rational expression. Check your answers before moving on to the next round. If your answer is incorrect, try again.

Elite Eight A: $\frac{x^2-4}{x+2}$ A: $\frac{x^2-7x+6}{x^2-x-42}$ A: $\frac{3x^2-7x-6}{5x^2-16x+3}$

Elite Eight A: $\frac{x^2+7x+6}{x^2-x-42}$ A: $\frac{x+1}{x-1}$ A: $\frac{3x+2}{5x-1}$

Elite Eight A: $\frac{x^2-4x-45}{x^2+2x-15}$ A: $\frac{x-3}{x-5}$ A: $\frac{x^2+2x-35}{x^2-44}$ A: $\frac{x-5}{x-1}$ A: $\frac{6x^2-x-1}{15x^2+8x+1}$ A: $\frac{2x-1}{5x+1}$

Elite Eight A: $\frac{x^2-8x+15}{x-3}$ A: $\frac{x-3}{x-5}$ A: $\frac{x^2+2x+1}{x^2-2x-3}$ A: $\frac{x-4}{x^2+3x+9}$

Elite Eight A: $\frac{x^2+2x+1}{x^2-2x-3}$ A: $\frac{x+1}{x-3}$ A: $\frac{x^2-7x+12}{x^3-27}$ A: $\frac{32x^2-50}{12x^3-15x^2-4x+5}$

Elite Eight A: $\frac{x^2+5x+6}{x^2+14x+24}$ A: $\frac{x+3}{x+12}$ A: $\frac{x-4}{x^2+3x+9}$ A: $\frac{2(4x+5)}{3x^2-1}$

Elite Eight A: $\frac{x^2-7x-44}{x^2-17x+66}$ A: $\frac{x+3}{x+12}$ A: $\frac{x-4}{x^2+3x+9}$ A: $\frac{2(4x+5)}{3x^2-1}$

Elite Eight A: $\frac{x^2-3x-40}{x^2-11x+24}$ A: $\frac{x+5}{x-3}$ A: $\frac{8x^2+15x-2}{4x^2+11x+6}$ A: $\frac{8x-1}{3x^3}$

Final Four A: $\frac{x+5}{x-3}$ A: $\frac{8x-1}{3x^3}$

Championship A: $\frac{2(4x+5)}{3x^2-1}$

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Skill: Simplifying Rational Expressions

Given the rational expressions, students will factor and simplify. 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-APR.D.6, HSA-APR.D.7,
HSA-REI.A.2, HSF-IF.C.7.d

TEKs: A2.6.I, A2.6.J, A2.6.K, A2.7.F

VA SOLs: EO.All.1.a, EI.All.3.c, F.All.6.a,
F.All.7deg

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.

1
Solve.
 $\frac{x^2-4x}{x^2-2x} + \frac{3x}{x^2-2x}$

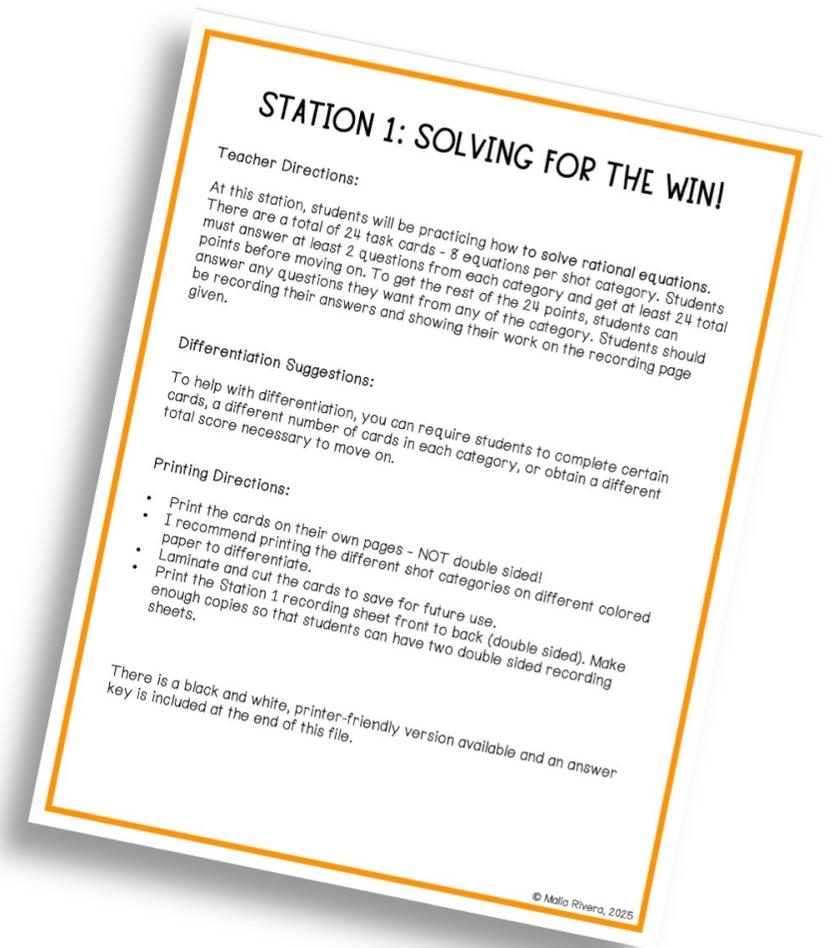
6
Solve.
 $\frac{2x+4}{x-1} + 2 = \frac{3x}{x}$

Normal Basket
2 Points

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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

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

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

The image displays three worksheets from a rational functions review resource. The top-left worksheet, 'STATION 2: DRIBBLE, DRIBBLE, SHOOT!', contains eight problems (numbered 1-8) involving rational expressions and a word search grid. The top-right worksheet, 'STATION 2: DRIBBLE, DRIBBLE, SHOOT!' (Answer Key), shows the solutions for the problems, including handwritten work and a 'CHAMPION' label. The bottom worksheet, 'STATION 4: MARCH MATHNESS MATCHUP', is a tournament-style bracket with 16 problems. The problems are arranged in a bracket that leads to a 'Championship' round and a 'Final Four' round. The problems include:

- Elite Eight: $\frac{x^2-4}{x+2}$, $\frac{3x^2-7x-6}{5x^2-16x+3}$, $\frac{x^2+7x+6}{x^2-x-42}$, $\frac{x^2-4x-45}{x^2+2x-15}$, $\frac{x^2-8x+15}{x-3}$, $\frac{x^2+2x+1}{x^2-2x-3}$, $\frac{x^2+5x+6}{x^2+14x+24}$, $\frac{x^2-7x-44}{x^2-17x+66}$, $\frac{x^2-3x-40}{x^2-11x+24}$
- Final Four: $\frac{x^2+2x-35}{x^2-49}$, $\frac{x^2-7x+12}{x^3-27}$, $\frac{32x^2-50}{12x^3-15x^2-4x+5}$, $\frac{8x^2+15x-2}{4x^2+11x+6}$
- Championship: $\frac{6x^2-x-1}{15x^2+8x+1}$

Each problem includes an answer key (A:). The tournament concludes with a trophy icon and the text '© Malia Rivera, 2025'.

You may also enjoy ...

SIMPLIFYING RATIONAL EXPRESSIONS

Differentiated circuit worksheet

SIMPLIFYING RATIONAL EXPRESSIONS CIRCUIT

Directions: A circuit is a route that starts and ends at the same place. Start in the first box left and solve the problem. Search through the remaining boxes for the answer you got for question 1. Continue until you have completed the questions and you are back to the original question. Record your path below.

1 → 7 → 2 → 10 → 6 → 4 → 3 → 5 →

1. Simplify the rational expression. $\frac{x^2-1}{x^2+2x-3}$

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

3. Simplify the rational expression. $\frac{x^2-9}{x^2+2x-3}$

4. Simplify the rational expression. $\frac{x^2-16}{3x^2-12}$



2 versions + Answer key included

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RATIONAL FUNCTIONS

Algebra 2 Guided Notes

COMPLEX FRACTIONS

Method 2

Step 1: Find the LCD of all the denominators in the complex fraction.

Step 2: Multiply the numerator and denominator by the LCD.

Step 3: Simplify.

SOLVING RATIONAL EQUATIONS

1. $\frac{1}{x-1} + \frac{1}{x+1} = \frac{2}{x}$

$\frac{x+1}{(x-1)(x+1)} + \frac{x-1}{(x+1)(x-1)} = \frac{2(x-1)(x+1)}{x(x-1)(x+1)}$

$\frac{x+1}{x^2-1} + \frac{x-1}{x^2-1} = \frac{2(x^2-1)}{x(x^2-1)}$

$\frac{x+1+x-1}{x^2-1} = \frac{2(x^2-1)}{x(x^2-1)}$

$\frac{2x}{x^2-1} = \frac{2(x^2-1)}{x(x^2-1)}$

$\frac{2x}{x^2-1} = \frac{2(x^2-1)}{x(x^2-1)}$

$2x^2 = 2(x^2-1)$

$2x^2 = 2x^2 - 2$

$0 = -2$

No solution.

GRAPHING RATIONAL FUNCTIONS

When graphing rational functions, you need to keep the following information:

Zeros	Hole(s)
Y-Intercept	Leading Coefficient

End Behavior at Vertical Asymptotes

When sketching the graph, there are two cases of end behavior:

Case 1: $(x - c)$ even. The arrows on either side of the vertical asymptote point in the same direction.

Case 2: $(x - c)$ odd. The arrows on either side of the vertical asymptote point in opposite directions.



Answer key included

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ALGEBRA 2 GUIDED NOTES

Year-Long Bundle

TRANSFORMATIONS OF FUNCTIONS

Type of Transformation	Graph
Reflection	$f(-x)$
Vertical Translation	$f(x) + k$
Horizontal Translation	$f(x - h)$
Vertical Stretch/Compression	$af(x)$
Horizontal Stretch/Compression	$f(bx)$

LINEAR REGRESSION

Best Fit Line: $y = mx + b$

GRAPHING QUADRATIC FUNCTIONS

Vertex: (h, k)

POLYNOMIAL FUNCTION CHARACTERISTICS

Graph	Touch	Inflection

PROPERTIES OF RATIONAL EXPONENTS & RADICALS

Property	Properties of Rational Exponents
Product of Powers	$a^m \cdot a^n = a^{m+n}$
Power of a Power	$(a^m)^n = a^{m \cdot n}$
Power of a Product	$(ab)^n = a^n \cdot b^n$
Negative Exponent	$a^{-n} = \frac{1}{a^n}$
Zero Exponent	$a^0 = 1$
Quotient of Powers	$\frac{a^m}{a^n} = a^{m-n}$
Power of a Quotient	$\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$



Answer key included

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Free Algebra Activities!

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check it out!

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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