

keep scrolling to  
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Help your Algebra students  
practice solving algebraic  
proportions. Your students will  
benefit from being given choice  
when it comes to how they want  
to practice math!

# ALGEBRAIC PROPORTIONS CHOICE BOARD

Algebraic Proportions Choice Board

Date: \_\_\_\_\_ Period: \_\_\_\_\_ name: \_\_\_\_\_

Choose \_\_\_\_\_ problems from each column. Show your work in the boxes.

**ANSWER KEY**

Algebraic Proportions Choice Board

Directions: Choose \_\_\_\_\_ problems from each column. Show your work.

$\frac{3k}{27} = \frac{2}{3}$	$\frac{6}{y} = \frac{2}{5}$	$\frac{10}{45} = \frac{x}{27}$
$\frac{5m}{6} = \frac{10}{12}$ $5m(12) = 6(10)$ $60m = 60$ $m = 1$	$\frac{3k}{27} = \frac{2}{3}$ $3(3k) = 27(2)$ $9k = 54$ $k = 6$	$\frac{6}{y} = \frac{2}{5}$ $6(5) = 2(y)$ $30 = 2y$ $15 = y$
$\frac{w-9}{9} = \frac{9}{3}$	$\frac{6}{d+4} = \frac{42}{77}$	$\frac{-49}{7} = \frac{1}{1}$
$\frac{10}{4} = \frac{n+9}{8}$ $8(10) = 4(n+9)$ $80 = 4n + 36$ $-36 \quad -36$ $44 = 4n$ $11 = n$	$\frac{w-9}{9} = \frac{9}{3}$ $3(w-9) = 9(9)$ $3w - 27 = 81$ $+27 \quad +27$ $3w = 108$ $w = 36$	$\frac{6}{d+4} = \frac{42}{77}$ $77(6) = 42(d+4)$ $462 = 42d + 168$ $-168 \quad -168$ $294 = 42d$ $7 = d$
$\frac{30}{9} = \frac{x}{12}$	$\frac{8}{12} = \frac{x}{x+1}$	$\frac{y}{2} = \frac{y-3}{4}$
$9(30) = 30(x)$ $45x = 30x + 30$ $-30x \quad -30x$ $15x = 30$ $x = 2$	$\frac{8}{12} = \frac{x}{x+1}$ $8(x+1) = 12x$ $8x + 8 = 12x$ $-8x \quad -8x$ $8 = 4x$ $2 = x$	$\frac{y}{2} = \frac{y-3}{4}$ $4(y) = 2(y-3)$ $4y = 2y - 6$ $-2y \quad -2y$ $2y = -6$ $y = -3$

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Why do you need this?



Allowing student choice in how they practice will encourage them to do the practice!



You can differentiate by the number of problems required of particular students.

# Solving Algebraic Proportions Choice Board

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

**Algebraic Proportions Choice Board**

Directions: Choose \_\_\_\_\_ problems from each column. Show your work in the boxes.

$\frac{5m}{6} = \frac{10}{12}$	$\frac{3k}{27} = \frac{2}{3}$	$\frac{6}{y} = \frac{2}{5}$	$\frac{10}{45} = \frac{x}{27}$
$\frac{10}{4} = \frac{n+9}{8}$	$\frac{w-9}{9} = \frac{4}{3}$	$\frac{6}{d+4} = \frac{42}{77}$	$\frac{10}{45} = \frac{x}{27}$
$\frac{5x}{x+1} = \frac{30}{9}$	$\frac{8}{12} = \frac{x}{x+1}$	$\frac{7}{2} = \frac{y-3}{4}$	$\frac{10}{45} = \frac{x}{27}$
$\frac{5n-10}{n} = \frac{10}{6}$	$\frac{2}{p} = \frac{14}{p+30}$	$\frac{24}{52+4} = \frac{4}{z+1}$	$\frac{10}{45} = \frac{x}{27}$

**ANSWER KEY**

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

**Algebraic Proportions Choice Board**

Directions: Choose \_\_\_\_\_ problems from each column. Show your work in the boxes.

$\frac{5m}{6} = \frac{10}{12}$ $5m(12) = 6(10)$ $60m = 60$ $m = 1$	$\frac{3k}{27} = \frac{2}{3}$ $3(3k) = 27(2)$ $9k = 54$ $k = 6$	$\frac{6}{y} = \frac{2}{5}$ $6(5) = 2(y)$ $30 = 2y$ $15 = y$	$\frac{10}{45} = \frac{x}{27}$ $27(10) = 45x$ $270 = 45x$ $6 = x$
$\frac{10}{4} = \frac{n+9}{8}$ $8(10) = 4(n+9)$ $80 = 4n + 36$ $44 = 4n$ $11 = n$	$\frac{w-9}{9} = \frac{4}{3}$ $3(w-9) = 9(4)$ $3w - 27 = 36$ $3w = 63$ $w = 21$	$\frac{6}{d+4} = \frac{42}{77}$ $77(6) = 42(d+4)$ $462 = 42d + 168$ $-168$ $294 = 42d$ $7 = d$	$\frac{10}{45} = \frac{x}{27}$ $27(10) = 45x$ $270 = 45x$ $6 = x$
$\frac{5x}{x+1} = \frac{30}{9}$ $9(5x) = 30(x+1)$ $45x = 30x + 30$ $15x = 30$ $x = 2$	$\frac{8}{12} = \frac{x}{x+1}$ $8(x+1) = 12x$ $8x + 8 = 12x$ $-8x$ $8 = 4x$ $2 = x$	$\frac{7}{2} = \frac{y-3}{4}$ $4(7) = 2(y-3)$ $28 = 2y - 6$ $-2y$ $24 = -6$ $4 = -3$	$\frac{10}{45} = \frac{x}{27}$ $27(10) = 45x$ $270 = 45x$ $6 = x$
$\frac{5n-10}{n} = \frac{10}{6}$ $6(5n-10) = 10n$ $30n - 60 = 10n$ $20n = 60$ $n = 3$	$\frac{2}{p} = \frac{14}{p+30}$ $2(p+30) = 14p$ $2p + 60 = 14p$ $-12p = -60$ $p = 5$	$\frac{24}{52+4} = \frac{4}{z+1}$ $24(z+1) = 4(52+4)$ $24z + 24 = 208 + 16$ $24z - 202 = 184$ $24z = 386$ $z = 16$	$\frac{10}{45} = \frac{x}{27}$ $27(10) = 45x$ $270 = 45x$ $6 = x$

# Solving Algebraic Proportions Choice Board *includes:*

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

*Algebraic Proportions Choice Board*

Directions: Choose \_\_\_\_\_ problems from each column. Show your work in the boxes.

$\frac{5m}{6} = \frac{10}{12}$	$\frac{3k}{7} = \frac{2}{3}$	$\frac{6}{y} = \frac{2}{5}$	$\frac{10}{45} = \frac{x}{27}$
$\frac{10}{4} = \frac{n+9}{8}$	$\frac{w-9}{9} = \frac{9}{3}$	$\frac{d+4}{77} = \frac{42}{77}$	$\frac{-4q}{7} = \frac{a+7}{6}$
$\frac{5x}{x+1} = \frac{30}{9}$	$\frac{8}{12} = \frac{x}{x+1}$	$\frac{y}{2} = \frac{y-3}{4}$	

- ✓ printable worksheet
- ✓ a detailed answer key
- ✓ 3 columns with 5 questions in each - 15 question total
- ✓ Spot to assign how many problems students need to complete

# Solving Algebraic Proportions Choice Board

standards covered:

**CCSS:** HSA-REI.B.3

**TEKs:** A1.5.A

**VA SOLs:** EI.A.4.a

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

**ANSWER KEY**

Algebraic Proportions Choice Board

Directions: Choose \_\_\_\_\_ problems from each column. Show your work in the boxes.

$\frac{5m}{6} = \frac{10}{12}$ $5m(12) = 6(10)$ $\frac{60m}{60} = \frac{60}{60}$ $m = 1$	$\frac{3k}{27} = \frac{2}{3}$ $3(3k) = 27(2)$ $\frac{9k}{9} = \frac{54}{9}$ $k = 6$	$\frac{6}{y} = \frac{2}{5}$ $6(5) = 2(y)$ $\frac{30}{2} = \frac{2y}{2}$ $15 = y$	$\frac{10}{45} = \frac{x}{27}$ $27(10) = 45(x)$ $\frac{270}{45} = \frac{45x}{45}$ $6 = x$
$\frac{10}{4} = \frac{n+9}{8}$ $8(10) = 4(n+9)$ $80 = 4n + 36$ $-36 \quad -36$ $44 = 4n$ $\frac{44}{4} = \frac{4n}{4}$ $11 = n$	$\frac{w-9}{9} = \frac{9}{3}$ $3(w-9) = 9(9)$ $3w-27 = 81$ $+27 \quad +27$ $\frac{3w}{3} = \frac{108}{3}$ $w = 36$	$\frac{6}{d+4} = \frac{42}{77}$ $77(6) = 42(d+4)$ $4(62) = 42d + 168$ $-168 \quad -168$ $\frac{294}{42} = \frac{42d}{42}$ $7 = d$	$\frac{-49}{7} = \frac{a+7}{6}$ $6(-49) = 7(a+7)$ $-294 = 7a + 49$ $-49 \quad -49$ $-343 = 7a$ $\frac{-343}{7} = \frac{7a}{7}$ $-49 = a$
$\frac{5x}{x+1} = \frac{30}{9}$ $9(5x) = 30(x+1)$	$\frac{8}{12} = \frac{x}{x+1}$		

# how the choice board resource works

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

*Algebraic Proportions Choice Board*

Directions: Choose \_\_\_\_\_ problems from each column. Show your work in the boxes.

$\frac{5m}{6} = \frac{10}{12}$	$\frac{3k}{27} = \frac{2}{3}$	$\frac{6}{y} = \frac{2}{5}$	$\frac{10}{45} = \frac{x}{27}$
$\frac{10}{4} = \frac{n+9}{8}$	$\frac{w-9}{9} = \frac{9}{3}$	$\frac{6}{d+4} = \frac{42}{77}$	$\frac{-49}{7} = \frac{a+7}{6}$
$\frac{5x}{x+1} = \frac{30}{9}$	$\frac{8}{12} = \frac{x}{x+1}$	$\frac{y}{2} = \frac{y-3}{4}$	$\frac{11}{w} = \frac{33}{w+24}$

Assign students the number of problems they need to complete from each column.

Differentiate the choice board worksheet by reducing the number of problems assigned to show mastery.

Students can complete the any problems they want to in each column and in any order.

# how to use this resource

This is a great individual practice activity to use when reviewing how to add solve algebraic expressions.

My favorite ways to use this choice board is for homework and math practice stations.

This is also a **substitute-friendly** assignment!

Name: \_\_\_\_\_ **ANSWER KEY** \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

### Algebraic Proportions Choice Board

Directions: Choose \_\_\_\_\_ problems from each column. Show your work in the boxes.

$\frac{5m}{6} = \frac{10}{12}$ $5m(12) = 6(10)$ $\frac{60m}{60} = \frac{60}{60}$ $m = 1$	$\frac{3k}{27} = \frac{2}{3}$ $3(3k) = 27(2)$ $\frac{9k}{9} = \frac{54}{9}$ $k = 6$	$\frac{6}{y} = \frac{2}{5}$ $6(5) = 2(y)$ $\frac{30}{2} = \frac{2y}{2}$ $15 = y$	$\frac{10}{45} = \frac{x}{27}$ $27(10) = 45(x)$ $\frac{270}{45} = \frac{45x}{45}$ $6 = x$
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Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

### Algebraic Proportions Choice Board

Directions: Choose \_\_\_\_\_ problems from each column. Show your work in the boxes.

$\frac{10}{4} = \frac{n+9}{8}$ $8(10) = 4(n+9)$ $80 = 4n + 36$ $-36 \quad -36$ $\frac{44}{4} = \frac{4n}{4}$ $11 = n$	$\frac{5m}{6} = \frac{10}{12}$	$\frac{3k}{27} = \frac{2}{3}$	$\frac{6}{y} = \frac{2}{5}$	$\frac{10}{45} = \frac{x}{27}$
$\frac{5x}{x+1} = \frac{30}{9}$ $9(5x) = 30(x+1)$ $45x = 30x + 30$ $-30x \quad -30x$ $\frac{15x}{15} = \frac{30}{15}$ $x = 2$	$\frac{10}{4} = \frac{n+9}{8}$	$\frac{w-9}{9} = \frac{9}{3}$	$\frac{6}{d+4} = \frac{42}{77}$	$\frac{-49}{7} = \frac{a+7}{6}$
$\frac{5n-10}{n} = \frac{10}{6}$ $6(5n-10) = n(10)$ $30n - 60 = 10n$ $-10n \quad -10n$ $20n - 60 = 0$ $+60 \quad +60$ $20n = 60$	$\frac{5x}{x+1} = \frac{30}{9}$	$\frac{8}{12} = \frac{x}{x+1}$	$\frac{y}{2} = \frac{y-3}{4}$	$\frac{11}{w} = \frac{33}{w+24}$

You may also enjoy ...

## SOLVING ALGEBRAIC PROPORTIONS PIXEL ART

#	Question	Answer	Directions: Answer each question correctly and pixels will appear to reveal a picture!
1	$\frac{10}{2} = \frac{x-5}{7}$		
2	$\frac{8}{x+10} = \frac{4}{8}$		
3	$\frac{x+5}{9} = \frac{8}{3}$		
4	$\frac{8}{x-2} = \frac{6}{x}$		
5	$\frac{x+8}{2} = \frac{5x}{6}$		
6	$\frac{x+3}{8} = \frac{x}{7}$		
7	$\frac{7}{8} = \frac{x}{x+7}$		
8	$\frac{x-3}{x} = \frac{7}{10}$		

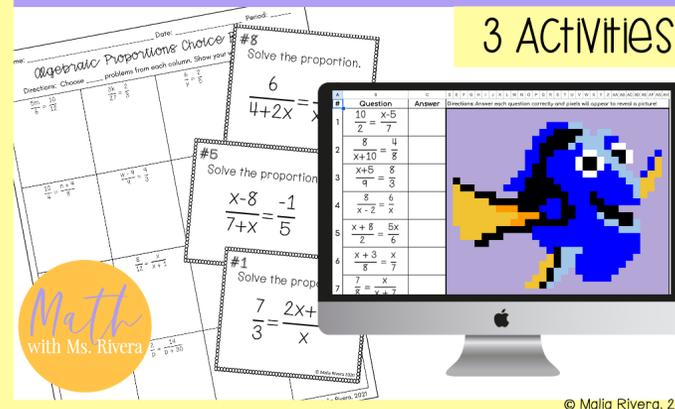
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Self-Checking

## ALGEBRAIC PROPORTIONS

Digital & Print Activity Pack

3 Activities



Algebraic Proportions Choice #8 Solve the proportion.

$$\frac{6}{4+2x} = \frac{3}{x}$$

#5 Solve the proportion.

$$\frac{x-8}{7+x} = \frac{-1}{5}$$

#1 Solve the proportion.

$$\frac{7}{3} = \frac{2x+1}{x}$$

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## SOLVING ALGEBRAIC PROPORTIONS

TASK CARDS

#2 Solve the proportion.

$$\frac{x}{9x-4}$$

#7 Solve the proportion.

$$\frac{3x+6}{7}$$

#10 Solve the proportion.

$$\frac{-3}{11} = \frac{5-x}{x+1.4}$$

Answer key included

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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.  
2.  $2x - 6y = -18$   
 $x = 3y - 9$

**ANSWER KEY**  
**SOLVING SYSTEMS OF EQUATIONS**  
Date: \_\_\_\_\_  
Solve systems of equations using substitution or elimination. Check your solution.  
2.  $2x - 6y = -18$   
 $x = 3y - 9$   
 $2(3y - 9) - 4y = -18$   
 $6y - 18 - 4y = -18$   
 $-18 = -18$   
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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