

keep scrolling to
get a sneak peek!

Help your Algebra students
practice dividing polynomial
expressions using long division.
Your students will benefit from
being given choice when it
comes to how they want to
practice math!

DIVIDING POLYNOMIALS CHOICE BOARD

Dividing Polynomials
Date: _____
Choose _____ problems from each column. Show your work in the boxes.

$(x^2 - 3x + 2) \div (x - 1)$	$(4x^2 - 28x - 120) \div (4x + 6)$
$(x^2 - 7x - 18) \div (x + 2)$	$(48x^2 - 28x - 40) \div (4x + 6)$
$(x^2 - x - 110) \div (x + 10)$	$(12x^2 + 86x - 110) \div (x + 10)$
$(5x^2 - 31x - 72) \div (x - 8)$	$(9x^2 - 11x - 110) \div (x - 11)$

ANSWER KEY
Date: _____
Directions: Choose _____ problems from each column. Show your work in the boxes.

$2x^3 + 6x^2 + 1$	$x - 2$
$-6m^3 - m^2 - 7m$	$x - 10$
$2y^4 - \frac{4}{3}y^3 - \frac{10}{3}y^2$	$x - 9$
	$x - 11$

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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.

Dividing Polynomials Choice Board

Two overlapping worksheets titled "Dividing Polynomials" are shown. The top worksheet is blank, while the bottom one is filled with handwritten solutions and answer keys.

Top Worksheet (Blank):

Name: _____ Date: _____ Period: _____

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

$(12x^5 + 36x^4 + 6x^2) \div 6x^2$	$(x^2 - 3x + 2) \div (x - 1)$	$(4x^2 - 28x - 120) \div (4x + 12)$
$(54m^6 + 9m^5 + 63m^4) \div -9m^3$	$(x^2 - 7x - 18) \div (x + 2)$	
$(-16y^8 + 24y^{10} - 40y^6) \div 12y^4$	$(x^2 - x - 110) \div (x + 10)$	
$(-4k^2 - 36k^5 - 28k^4) \div 4k$	$(5x^2 - 31x - 72) \div (x - 8)$	
$(15g^7 + 45g^{12} - 5g^9) \div -5g^5$	$(8x^2 + 19x - 15) \div (x + 3)$	

Bottom Worksheet (Answer Key):

Name: _____ Date: _____ Period: _____

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

ANSWER KEY

$(12x^5 + 36x^4 + 6x^2) \div 6x^2$	$(x^2 - 3x + 2) \div (x - 1) = x - 2$	$(4x^2 - 28x - 120) \div (4x + 12) = x - 10$
$(54m^6 + 9m^5 + 63m^4) \div -9m^3$	$(x^2 - 7x - 18) \div (x + 2) = x - 9$	$(48x^2 - 28x - 40) \div (4x + 12) = x - 8$
$(-16y^8 + 24y^{10} - 40y^6) \div 12y^4$	$(x^2 - x - 110) \div (x + 10) = x - 11$	$(12x^2 + 86x - 15) \div (x + 3) = 12x - 5$
$(-4k^2 - 36k^5 - 28k^4) \div 4k$	$(5x^2 - 31x - 72) \div (x - 8) = 5x + 9$	
$(15g^7 + 45g^{12} - 5g^9) \div -5g^5$		

Handwritten solutions for the bottom worksheet include:

- $(12x^5 + 36x^4 + 6x^2) \div 6x^2 = 2x^3 + 6x^2 + 1$
- $(x^2 - 3x + 2) \div (x - 1) = x - 2$
- $(4x^2 - 28x - 120) \div (4x + 12) = x - 10$
- $(54m^6 + 9m^5 + 63m^4) \div -9m^3 = -6m^3 - m^2 - 7m$
- $(x^2 - 7x - 18) \div (x + 2) = x - 9$
- $(48x^2 - 28x - 40) \div (4x + 12) = x - 8$
- $(-16y^8 + 24y^{10} - 40y^6) \div 12y^4 = -\frac{4}{3}y^4 + 2y^6 - \frac{10}{3}y^2$
- $(x^2 - x - 110) \div (x + 10) = x - 11$
- $(12x^2 + 86x - 15) \div (x + 3) = 12x - 5$
- $(-4k^2 - 36k^5 - 28k^4) \div 4k = -k - 9k^4 - 7k^3$
- $(5x^2 - 31x - 72) \div (x - 8) = 5x + 9$

Dividing Polynomials Choice Board *includes:*

Name: _____ Date: _____ Period: _____

Dividing Polynomials

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

$(12x^5 + 36x^4 + 6x^2) \div 6x^2$	$(x^2 - 3x + 2) \div (x - 1)$	$(4x^2 - 28x - 120) \div (4x + 12)$
$(54m^6 + 9m^5 + 63m^4) \div -9m^3$	$(x^2 - 7x - 18) \div (x + 2)$	$(11x^2 - 20x - 40) \div (12x + 8)$
$(-16y^8 + 24y^{10} - 40y^6) \div 12y^4$	$(x^2 - x - 110) \div (x + 10)$	$(12x^2 + 86x - 80) \div (12x - 10)$
$4k^2 - 36k^5$		

- ✓ 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

Dividing Polynomials Choice Board

standards covered:

CCSS: HSA-APR.B.2

TEKs: A1.10.C

VA SOLs: EO.A.2.b

Name: _____ Date: _____ Period: _____

ANSWER KEY

Dividing Polynomials

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

$(12x^5 + 36x^4 + 6x^2) \div 6x^2$ $2x^3 + 6x^2 + 1$	$(x^2 - 3x + 2) \div (x - 1) = x - 2$ $x-1 \overline{) x^2 - 3x + 2}$ $\underline{-(x^2 - x)}$ $-2x + 2$ $\underline{-(-2x + 2)}$ 0 $x-2$	$(4x^2 - 28x - 120) \div (4x + 12)$ $4x+12 \overline{) 4x^2 - 28x - 120}$ $\underline{-(4x^2 + 12x)}$ $-40x - 120$ $\underline{-(-40x - 120)}$ 0 $x-10$
$(54m^6 + 9m^5 + 63m^4) \div -9m^3$ $-6m^3 - m^2 - 7m$	$(x^2 - 7x - 18) \div (x + 2)$ $x+2 \overline{) x^2 - 7x - 18}$ $\underline{-(x^2 + 2x)}$ $-9x - 18$ $\underline{-(-9x - 18)}$ 0 $x-9$	$(48x^2 - 28x - 40) \div (12x + 8)$ $12x+8 \overline{) 48x^2 - 28x - 40}$ $\underline{-(48x^2 + 32x)}$ $-60x - 40$ $\underline{-(-60x - 40)}$ 0 $4x-5$
$(-16y^8 + 24y^{10} - 40y^6) \div 12y^4$ $-\frac{4}{3}y^4 + 2y^6 - \frac{10}{3}y^2$ $2y^6 - \frac{4}{3}y^4 - \frac{10}{3}y^2$	$(x^2 - x - 110) \div (x + 10)$ $x+10 \overline{) x^2 - x - 110}$ $\underline{-(x + 10x)}$ $-11x - 110$	$(12x^2 + 86x - 80) \div (12x - 10)$ $12x-10 \overline{) 12x^2 + 86x - 80}$ $\underline{-(12x^2 + 80x - 80)}$

how the choice board resource works

Name: _____ Date: _____ Period: _____

Dividing Polynomials

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

$(12x^5 + 36x^4 + 6x^2) \div 6x^2$	$(x^2 - 3x + 2) \div (x - 1)$	$(4x^2 - 28x - 120) \div (4x + 12)$
$(54m^6 + 9m^5 + 63m^4) \div -9m^3$	$(x^2 - 7x - 18) \div (x + 2)$	$(48x^2 - 28x - 40) \div (12x + 8)$
$(-16y^8 + 24y^{10} - 40y^6) \div 12y^4$	$(x^2 - x - 110) \div (x + 10)$	$(12x^2 + 86x - 80) \div (12x - 10)$
$(-4k^2 - 36k^5 - 28k^4) \div 4k$	$(5x^2 - 31x - 72) \div (x - 8)$	$(9x^2 + 105x - 36) \div (9x - 3)$

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 divide polynomial expressions using long division.

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

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

Name: _____ Date: _____ Period: _____

Dividing Polynomials

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

$(12x^5 + 36x^4 + 6x^2) \div 6x^2$ $2x^3 + 6x^2 + 1$	$(x^2 - 3x + 2) \div (x - 1) = x - 2$ $\begin{array}{r} x-2 \\ x-1 \overline{) x^2-3x+2} \\ \underline{-(x^2-x)} \\ -2x+2 \\ \underline{-(-2x+2)} \\ 0 \end{array}$ $x-2$	$(4x^2 - 28x - 120) \div (4x + 12)$ $\begin{array}{r} x-10 \\ 4x+12 \overline{) 4x^2-28x-120} \\ \underline{-(4x^2+12x)} \\ -40x-120 \\ \underline{-(-40x-120)} \\ 0 \end{array}$ $x-10$												
$(54m^6 + 9m^5 + 63m^4) \div -9m^3$ $-6m^3 - m^2 - 7m$	<p>Name: _____ Date: _____ Period: _____</p> <h3>Dividing Polynomials</h3> <p>Directions: Choose _____ problems from each column. Show your work in the boxes.</p> <table border="1"> <tr> <td> $(12x^5 + 36x^4 + 6x^2) \div 6x^2$ </td> <td> $(x^2 - 3x + 2) \div (x - 1)$ </td> <td> $(4x^2 - 28x - 120) \div (4x + 12)$ </td> </tr> <tr> <td> $(-16y^8 + 24y^{10} - 40y^6) \div 12y^4$ $-\frac{4}{3}y^4 + 2y^6 - \frac{10}{3}y^2$ $2y^6 - \frac{4}{3}y^4 - \frac{10}{3}y^2$ </td> <td> $(54m^6 + 9m^5 + 63m^4) \div -9m^3$ </td> <td> $(x^2 - 7x - 18) \div (x + 2)$ </td> </tr> <tr> <td> $(-4k^2 - 36k^5 - 28k^4) \div 4k$ $-k - 9k^4 - 7k^3$ $-9k^4 - 7k^3 - k$ </td> <td> $(-16y^8 + 24y^{10} - 40y^6) \div 12y^4$ </td> <td> $(12x^2 + 86x - 80) \div (12x - 10)$ </td> </tr> <tr> <td> $(15g^7 + 45g^{12} - 5g^9) \div -5g^5$ $-3g^2 - 9g^7 + g^4$ </td> <td> $(x^2 - x - 110) \div (x + 10)$ </td> <td> </td> </tr> </table>		$(12x^5 + 36x^4 + 6x^2) \div 6x^2$	$(x^2 - 3x + 2) \div (x - 1)$	$(4x^2 - 28x - 120) \div (4x + 12)$	$(-16y^8 + 24y^{10} - 40y^6) \div 12y^4$ $-\frac{4}{3}y^4 + 2y^6 - \frac{10}{3}y^2$ $2y^6 - \frac{4}{3}y^4 - \frac{10}{3}y^2$	$(54m^6 + 9m^5 + 63m^4) \div -9m^3$	$(x^2 - 7x - 18) \div (x + 2)$	$(-4k^2 - 36k^5 - 28k^4) \div 4k$ $-k - 9k^4 - 7k^3$ $-9k^4 - 7k^3 - k$	$(-16y^8 + 24y^{10} - 40y^6) \div 12y^4$	$(12x^2 + 86x - 80) \div (12x - 10)$	$(15g^7 + 45g^{12} - 5g^9) \div -5g^5$ $-3g^2 - 9g^7 + g^4$	$(x^2 - x - 110) \div (x + 10)$	
$(12x^5 + 36x^4 + 6x^2) \div 6x^2$	$(x^2 - 3x + 2) \div (x - 1)$	$(4x^2 - 28x - 120) \div (4x + 12)$												
$(-16y^8 + 24y^{10} - 40y^6) \div 12y^4$ $-\frac{4}{3}y^4 + 2y^6 - \frac{10}{3}y^2$ $2y^6 - \frac{4}{3}y^4 - \frac{10}{3}y^2$	$(54m^6 + 9m^5 + 63m^4) \div -9m^3$	$(x^2 - 7x - 18) \div (x + 2)$												
$(-4k^2 - 36k^5 - 28k^4) \div 4k$ $-k - 9k^4 - 7k^3$ $-9k^4 - 7k^3 - k$	$(-16y^8 + 24y^{10} - 40y^6) \div 12y^4$	$(12x^2 + 86x - 80) \div (12x - 10)$												
$(15g^7 + 45g^{12} - 5g^9) \div -5g^5$ $-3g^2 - 9g^7 + g^4$	$(x^2 - x - 110) \div (x + 10)$													

You may also enjoy ...

MULTIPLYING POLYNOMIALS

Choice Board

Date: _____ Name: _____ **ANSWER KEY** Date: _____

Multiplying Polynomials
Directions: Choose _____ problems from each column. Show your work in the boxes.

$5x^3(3x + 6)$	$3x^2(5x^4 - 5x^2)$	$3x(4x - 8)$	$5x^3(3x + 6)$
		$12x^2 - 24x$	$15x^4 + 30x^3$
$(x + 8)(x - 8)$	$(2x - 2)(2x + 2)$	$(4x + 8)(3x + 1)$	$(x + 8)(x - 8)$
		$12x^2 + 4x + 24x + 8$	$x^2 - 8x + 8x - 64$
		$12x^2 + 28x + 8$	$x^2 - 64$
$(3x + 4)(3x + 4)$	$(x^3 - 2x^2 + 3x - 4)(x - 2)$	$(-3x^2 + 4x)(x - 2)$	$(3x + 4)(3x + 4)$
		$-3x^3 + 6x^2 - 8x + 8$	$9x^2 + 12x + 16$

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DIVIDING POLYNOMIALS

Digital & Print Activity Pack

3 Activities

Date: _____ Name: _____ **ANSWER KEY** Date: _____

Dividing Polynomials
Directions: Choose _____ problems from each column. Show your work in the boxes.

$12x^2 \div 36x^2 = 1/3$	$(x^2 - 3x + 2) \div (x - 1)$	$(6x^2 - 28x - 40) \div (3x + 4)$
$(10x^3 + 9x^2 + 63x) \div 3x$	$(x^2 - 7x - 35) \div (x + 2)$	$(16x^2 - 85x + 80) \div (4x - 5)$
$(-34x^3 + 2x^2 + 10x) \div (-11x^2)$	$(x^2 - x - 12) \div (x + 3)$	$(6x^2 - 35x + 72) \div (x - 8)$
$(10x^3 - 30x^2 + 15x) \div (-5x^2)$	$(2x^2 + 7x - 35) \div (x + 5)$	$(10x^2 - 35x + 15) \div (10x - 5)$

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POLYNOMIAL OPERATIONS

Choice Board

Date: _____ Name: _____ **ANSWER KEY** Date: _____

Polynomial Operations
Directions: Choose _____ problems from each column. Show your work in the boxes.

$3x^2 + 12x^3 + 4x^2 - 12$	$(5x + 9)(10x - 2)$	$(10x^2 - 6x - 7) + (12x^3 + 4x^2 - 12)$	$(5x + 9)(10x - 2)$
		$12x^3 + 14x^2 - 6x - 19$	$50x^2 - 10x + 90x - 18$
$4x + 3x^3 - (2x^3 - 2x - x^4)$	$(-4x + 8)(5x - 1)$	$(-7x + 4x^4 + 3x^3) - (2x^3 - 2x - x^4)$	$(-4x + 8)(5x - 1)$
		$5x^4 + x^3 - 5x$	$-20x^2 + 4x + 40x - 8$
$4x^2 - 2x - (-5x^2 - 6x + 5x^3)$	$(x + 4)(2x^2 + 4x - 2)$	$(5x^3 - 4x^2 - 2x) - (-5x^2 - 6x + 5x^3)$	$-20x^2 + 44x - 8$
		$x^2 + 4x$	$2x^3 + 4x^2 - 2x + 8x$

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Answer Key
Name: _____ Date: _____
ADDING & SUBTRACTING RATIONAL EXPRESSIONS
Directions: Simplify each rational expression. Show your work.

SOLVING SYSTEMS OF EQUATIONS
Date: _____
Solve each system of equations using substitution or elimination. Check your solution.

ANSWER KEY
SOLVING SYSTEMS OF EQUATIONS
Date: _____
Solve each system of equations using substitution or elimination. Check your solution.

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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