

keep scrolling to
get a sneak peek!

Help your Algebra 1 students
practice **simplifying non-
perfect square and cube root
radicals**. Your students will
benefit from being given choice
when it comes to how they want
to practice math!

SIMPLIFYING RADICALS SQUARES & CUBES

CHOICE BOARD

Date: _____ Period: _____ Name: _____

ANSWER KEY

Simplifying Non-Perfect Squares & Cubes

Directions: Choose _____ problems from each column.

Cube Roots	Simplifying with Coefficients	Square Roots	Cube Roots
$\sqrt[3]{72}$	$-\sqrt[3]{-162}$	$\sqrt{48}$ $\sqrt{16 \cdot 3}$ $\sqrt{16} \sqrt{3}$ $4\sqrt{3}$	$\sqrt[3]{72}$ $\sqrt[3]{8 \cdot 9}$ $\sqrt[3]{8} \sqrt[3]{9}$ $2\sqrt[3]{9}$
$\sqrt[3]{-864}$	$9\sqrt[3]{576}$	$\sqrt{700}$ $\sqrt{7 \cdot 100}$ $\sqrt{7} \sqrt{100}$ $10\sqrt{7}$	$\sqrt[3]{-864}$ $\sqrt[3]{-1 \cdot 216 \cdot 4}$ $\sqrt[3]{-1} \sqrt[3]{216} \sqrt[3]{4}$ $-1 \cdot 6 \sqrt[3]{4}$ $-6\sqrt[3]{4}$
$\sqrt[3]{-216}$	$-3\sqrt[3]{-216}$	$\sqrt{224}$ $\sqrt{16 \cdot 14}$ $\sqrt{16} \sqrt{14}$ $4\sqrt{14}$	$\sqrt[3]{-243}$ $\sqrt[3]{-1 \cdot 27 \cdot 9}$ $\sqrt[3]{-1} \sqrt[3]{27} \sqrt[3]{9}$ $-1 \cdot 3 \sqrt[3]{9}$ $-3\sqrt[3]{9}$

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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.

Simplifying Square & Cube Roots Choice Board

Name: _____ Date: _____ Period: _____

Simplifying Non-Perfect Squares & Cubes

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

Square Roots	Cube Roots	Simplifying with Coefficients
$\sqrt{48}$	$\sqrt[3]{72}$	
$\sqrt{700}$	$\sqrt[3]{-864}$	
$\sqrt{224}$	$\sqrt[3]{-243}$	
$\sqrt{486}$	$\sqrt[3]{324}$	
$\sqrt{180}$	$\sqrt[3]{1625}$	

Name: _____ Date: _____ Period: _____

ANSWER KEY

Simplifying Non-Perfect Squares & Cubes

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

Square Roots	Cube Roots	Simplifying with Coefficients
$\sqrt{48}$ $\sqrt{16 \cdot 3}$ $\sqrt{16} \sqrt{3}$ $4\sqrt{3}$	$\sqrt[3]{72}$ $\sqrt[3]{8 \cdot 9}$ $\sqrt[3]{8} \sqrt[3]{9}$ $2\sqrt[3]{9}$	$\sqrt[3]{-162}$ $-\sqrt[3]{1 \cdot 27 \cdot 6}$ $-\sqrt[3]{1 \cdot 27} \sqrt[3]{6}$ $-1 \cdot 3 \sqrt[3]{6}$ $-3\sqrt[3]{6}$
$\sqrt{700}$ $\sqrt{7 \cdot 100}$ $\sqrt{7} \sqrt{100}$ $10\sqrt{7}$	$\sqrt[3]{-864}$ $\sqrt[3]{-1 \cdot 216 \cdot 4}$ $\sqrt[3]{-1} \sqrt[3]{216} \sqrt[3]{4}$ $-1 \cdot 6 \sqrt[3]{4}$ $-6\sqrt[3]{4}$	$\sqrt[3]{9 \cdot 15}$ $\sqrt[3]{9 \cdot 3 \cdot 5}$ $\sqrt[3]{9} \sqrt[3]{3} \sqrt[3]{5}$ $\sqrt[3]{3} \sqrt[3]{3} \sqrt[3]{5}$ $3\sqrt[3]{5}$
$\sqrt{224}$ $\sqrt{16 \cdot 14}$ $\sqrt{16} \sqrt{14}$ $4\sqrt{14}$	$\sqrt[3]{-243}$ $\sqrt[3]{-1 \cdot 27 \cdot 9}$ $\sqrt[3]{-1} \sqrt[3]{27} \sqrt[3]{9}$ $-1 \cdot 3 \sqrt[3]{9}$ $-3\sqrt[3]{9}$	$\sqrt[3]{-3}$ $-\sqrt[3]{1 \cdot 3}$ $-\sqrt[3]{1} \sqrt[3]{3}$ $-1 \sqrt[3]{3}$ $-\sqrt[3]{3}$
$\sqrt{486}$ $\sqrt{81 \cdot 6}$ $\sqrt{81} \sqrt{6}$ $9\sqrt{6}$	$\sqrt[3]{324}$ $\sqrt[3]{27 \cdot 12}$ $\sqrt[3]{27} \sqrt[3]{12}$ $3\sqrt[3]{12}$	$\sqrt[3]{1625}$ $\sqrt[3]{125 \cdot 13}$ $\sqrt[3]{125} \sqrt[3]{13}$ $5\sqrt[3]{13}$

Simplifying Square & Cube Roots Choice Board *includes:*

Name: _____ Date: _____ Period: _____

Simplifying Non-Perfect Squares & Cubes

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

Square Roots	Cube Roots	Simplifying with Coefficients
$\sqrt{48}$	$\sqrt[3]{72}$	$-\sqrt[3]{-162}$
$\sqrt{700}$	$\sqrt[3]{-804}$	$9\sqrt[3]{576}$
$\sqrt{224}$	$\sqrt[3]{-243}$	$-3\sqrt{250}$

- ✓ 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

Simplifying Square & Cube Roots Choice Board

standards covered:

CCSS: HSA-RN.A.2

TEKs: A1.11.A

VA SOLs: EO.A.3.a

Name: _____ Date: _____ Period: _____

ANSWER KEY

Simplifying Non-Perfect Squares & Cubes

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

Square Roots	Cube Roots	Simplifying with Coefficients
$\sqrt{48}$ $\sqrt{16 \cdot 3}$ $\sqrt{16} \sqrt{3}$ $4\sqrt{3}$	$\sqrt[3]{72}$ $\sqrt[3]{8 \cdot 9}$ $\sqrt[3]{8} \sqrt[3]{9}$ $2\sqrt[3]{9}$	$-\sqrt[3]{-162}$ $-1 \sqrt[3]{-1 \cdot 27 \cdot 6}$ $-1 \sqrt[3]{-1} \sqrt[3]{27} \sqrt[3]{6}$ $-1 \cdot -1 \cdot 3 \sqrt[3]{6}$ $3\sqrt[3]{6}$
$\sqrt{700}$ $\sqrt{7 \cdot 100}$ $\sqrt{7} \sqrt{100}$ $10\sqrt{7}$	$\sqrt[3]{-864}$ $\sqrt[3]{-1 \cdot 216 \cdot 4}$ $\sqrt[3]{-1} \sqrt[3]{216} \sqrt[3]{4}$ $-1 \cdot 6 \sqrt[3]{4}$ $-6\sqrt[3]{4}$	$9\sqrt[3]{576}$ $9 \sqrt[3]{64 \cdot 9}$ $9 \sqrt[3]{64} \sqrt[3]{9}$ $9 \cdot 8 \sqrt[3]{9}$ $72\sqrt[3]{9}$
$\sqrt{224}$ $\sqrt{16 \cdot 14}$ $\sqrt{16} \sqrt{14}$ $4\sqrt{14}$	$\sqrt[3]{-243}$ $\sqrt[3]{-1 \cdot 27 \cdot 9}$ $\sqrt[3]{-1} \sqrt[3]{27} \sqrt[3]{9}$ $-1 \cdot 3 \sqrt[3]{9}$ $-3\sqrt[3]{9}$	$-3\sqrt[3]{250}$ $-3 \sqrt[3]{125 \cdot 2}$ $-3 \sqrt[3]{125} \sqrt[3]{2}$ $-3 \cdot 5 \sqrt[3]{2}$ $-15\sqrt[3]{2}$

how the choice board resource works

Name: _____ Date: _____ Period: _____

Simplifying Non-Perfect Squares & Cubes

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

Square Roots	Cube Roots	Simplifying with Coefficients
$\sqrt{48}$	$\sqrt[3]{72}$	$-\sqrt[3]{-162}$
$\sqrt{700}$	$\sqrt[3]{-864}$	$9\sqrt[3]{576}$
$\sqrt{224}$	$\sqrt[3]{-243}$	$-3\sqrt{250}$
$\sqrt{486}$	$\sqrt[3]{324}$	$4\sqrt{112}$

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 simplify square & cube root radical 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: _____

Simplifying Non-Perfect Squares & Cubes

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

Square Roots	Cube Roots	Simplifying with Coefficients
$\sqrt{48}$ $\sqrt{16 \cdot 3}$ $\sqrt{16} \sqrt{3}$ $4\sqrt{3}$	$\sqrt[3]{72}$ $\sqrt[3]{8 \cdot 9}$ $\sqrt[3]{8} \sqrt[3]{9}$ $2\sqrt[3]{9}$	$-\sqrt[3]{-162}$ $-1 \sqrt[3]{-1 \cdot 27 \cdot 6}$ $-1 \sqrt[3]{-1} \sqrt[3]{27} \sqrt[3]{6}$ $-1 \cdot -1 \cdot 3 \sqrt[3]{6}$
$\sqrt{700}$ $\sqrt{7 \cdot 100}$ $\sqrt{7} \sqrt{100}$ $10\sqrt{7}$		
$\sqrt{224}$ $\sqrt{16 \cdot 14}$ $\sqrt{16} \sqrt{14}$ $4\sqrt{14}$		
$\sqrt{486}$ $\sqrt{81 \cdot 6}$ $\sqrt{81} \sqrt{6}$ $9\sqrt{6}$		
$\sqrt{180}$ $\sqrt{36 \cdot 5}$ $\sqrt{36} \sqrt{5}$ $6\sqrt{5}$		

Name: _____ Date: _____ Period: _____

Simplifying Non-Perfect Squares & Cubes

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

Square Roots	Cube Roots	Simplifying with Coefficients
$\sqrt{48}$	$\sqrt[3]{72}$	$-\sqrt[3]{-162}$
$\sqrt{700}$	$\sqrt[3]{-864}$	$9\sqrt[3]{576}$
$\sqrt{224}$	$\sqrt[3]{-243}$	$-3\sqrt{250}$

You may also enjoy ...

SIMPLIFYING RADICALS CUBE ROOTS Choice Board

ANSWER KEY

Simplifying Non-Perfect Cubes
Directions: Choose _____ problems from each column.

$\sqrt[3]{192}$	$\sqrt[3]{54}$ 3 27 2	$\sqrt[3]{192}$ 3 64 3
$\sqrt[3]{-243}$	$\sqrt[3]{-1080}$ -1 216 5	$\sqrt[3]{-243}$ -1 27 9
$\sqrt[3]{576}$	$\sqrt[3]{2000}$ 10 2 1000	$\sqrt[3]{576}$ 8 72 9

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SIMPLIFYING RADICALS WITH VARIABLES Digital & Printable

Simplifying Monomial Radicals
Directions: When typing your answer, make sure to put your variables in alphabetical order. To put an exponent use $^$. If you answer correctly, the box will turn green. If you answer incorrectly, the box will turn red.

$\sqrt{40x^3}$	$\sqrt{800x^3y^2z^5}$	$\sqrt{228x^4yz^3}$	$\sqrt{147x^2y^{13}}$	$\sqrt{144x^4}$
$\sqrt{125x}$	$\sqrt{32xy^3z^8}$	$\sqrt{220xy^2}$	$\sqrt{360xy^4}$	$\sqrt{72xy^2z^2}$
$\sqrt{64xy^2}$	$\sqrt{48x^3y^4}$	$\sqrt{625x^3y^2z^8}$	$\sqrt{10x^5y^3}$	$\sqrt{88x^3y^2z^3}$
$\sqrt{36x^2y^3}$	$\sqrt{12y^2z}$	$\sqrt{48x^2yz^{10}}$	$\sqrt{25x^4y^4}$	$\sqrt{27x^{11}y^2z^2}$

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SIMPLIFYING RADICALS WITH VARIABLES Digital & Print Activity Pack

4 Activities

Simplifying Monomial Radicals with Variables
Directions: Put each monomial into simplest radical form.

Simplifying Radical Expressions with Variables
Put each radical into simplest radical form. Find your answer in the answer bank. Type the corresponding letter in the column. If you are correct, it will turn green. If you are incorrect, it will turn red.

$\sqrt{160x^3}$	$\sqrt{800x^3y^2z^5}$	$\sqrt{147x^2y^{13}}$	$\sqrt{144x^4}$
$\sqrt{125x}$	$\sqrt{32xy^3z^8}$	$\sqrt{220xy^2}$	$\sqrt{360xy^4}$
$\sqrt{64xy^2}$	$\sqrt{48x^3y^4}$	$\sqrt{625x^3y^2z^8}$	$\sqrt{10x^5y^3}$
$\sqrt{36x^2y^3}$	$\sqrt{12y^2z}$	$\sqrt{48x^2yz^{10}}$	$\sqrt{25x^4y^4}$

Answer Bank

A	$10x^2\sqrt{2}$	B	$7x^2y^3\sqrt{3}$	C	$4x^2\sqrt{5xy}$
D	$5y^2\sqrt{3x}$	E	$4xz^3\sqrt{6xy}$	F	$6x^2\sqrt{2x}$
G	$8x$	H	$6\sqrt{3x}$	I	$6x\sqrt{6}$
J	$5x^2yz^4\sqrt{3y}$	K	$7x^4\sqrt{3x}$	L	$8xy^2\sqrt{2xy}$

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Free Algebra Activities!

When you join my email list, I'll send you a free Algebra print & digital self-checking activities. There is an Algebra 1 and Algebra 2 version!

You'll also be getting exclusive freebies and content to help your Algebra students be successful this school year!

check it out!

The image shows a collage of algebra worksheets and a digital tablet. The worksheets include:

- Answer Key** for **ADDING & SUBTRACTING RATIONAL EXPRESSIONS** and **SOLVING SYSTEMS OF EQUATIONS**.
- MULTIPLYING & DIVIDING RATIONAL EXPRESSIONS** worksheet with problems like $2. \frac{x}{x+4} \cdot \frac{x^2}{x^2-16}$.
- SOLVING SYSTEMS OF EQUATIONS** worksheet with problems like $2. 2x - 6y = -18$ and $x = 3y - 4$.

The digital tablet displays a self-checking activity titled **Rational Expression Operations - Addition & Subtraction**. The directions are: "Answer each question and type the question number with the matching answer in the answer column to the right." The activity consists of a table with 8 questions and 8 answers, with a path of colored lines connecting the questions to their corresponding answers.

#	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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