

keep scrolling to
get a sneak peek!

Help your Algebra 1 students
practice **simplifying radical
expressions with cube roots.**

Your students will benefit from
being given choice when it comes
to how they want to practice math!

SIMPLIFYING RADICALS CUBE ROOTS CHOICE BOARD

Name: _____ Date: _____

ANSWER KEY

Simplifying Non-Perfect Cubes

Directions: Choose _____ problems from each column.

$\sqrt[3]{192}$	$\sqrt[3]{54}$ $\sqrt[3]{27 \cdot 2}$ $\sqrt[3]{27} \cdot \sqrt[3]{2}$ $3\sqrt[3]{2}$	$\sqrt[3]{192}$ $\sqrt[3]{64 \cdot 3}$ $\sqrt[3]{64} \cdot \sqrt[3]{3}$ $4\sqrt[3]{3}$
$\sqrt[3]{-243}$	$\sqrt[3]{-1080}$ $\sqrt[3]{-1 \cdot 216 \cdot 5}$ $\sqrt[3]{-1} \cdot \sqrt[3]{216} \cdot \sqrt[3]{5}$ $-1 \cdot 6 \sqrt[3]{5}$ $-6\sqrt[3]{5}$	$\sqrt[3]{-243}$ $\sqrt[3]{-1 \cdot 27 \cdot 9}$ $\sqrt[3]{-1} \cdot \sqrt[3]{27} \cdot \sqrt[3]{9}$ $-1 \cdot 3 \sqrt[3]{9}$ $-3\sqrt[3]{9}$
$\sqrt[3]{576}$	$\sqrt[3]{2000}$ $\sqrt[3]{2 \cdot 1000}$ $\sqrt[3]{2} \cdot \sqrt[3]{1000}$ $10\sqrt[3]{2}$	$\sqrt[3]{576}$ $\sqrt[3]{64 \cdot 9}$ $4\sqrt[3]{9}$

Math with Ms. Rivera

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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 Non-Perfect Cube Roots Choice Board

Name: _____ Date: _____ Period: _____

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

$\sqrt[3]{54}$	$\sqrt[3]{192}$	$\sqrt[3]{32}$
$\sqrt[3]{-1080}$	$\sqrt[3]{-243}$	
$\sqrt[3]{2000}$	$\sqrt[3]{576}$	
$-8\sqrt[3]{144}$	$-13\sqrt[3]{648}$	
$4\sqrt[3]{1125}$	$7\sqrt[3]{2048}$	

ANSWER KEY

Name: _____ Date: _____ Period: _____

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

$\sqrt[3]{54}$ $\sqrt[3]{27 \cdot 2}$ $\sqrt[3]{27} \cdot \sqrt[3]{2}$ $3\sqrt[3]{2}$	$\sqrt[3]{192}$ $\sqrt[3]{64 \cdot 3}$ $\sqrt[3]{64} \cdot \sqrt[3]{3}$ $4\sqrt[3]{3}$	$\sqrt[3]{32}$ $\sqrt[3]{8 \cdot 4}$ $\sqrt[3]{8} \cdot \sqrt[3]{4}$ $2\sqrt[3]{4}$
$\sqrt[3]{-1080}$ $\sqrt[3]{-1 \cdot 216 \cdot 5}$ $\sqrt[3]{-1} \cdot \sqrt[3]{216} \cdot \sqrt[3]{5}$ $-1 \cdot 6\sqrt[3]{5}$ $-6\sqrt[3]{5}$	$\sqrt[3]{-243}$ $\sqrt[3]{-1 \cdot 27 \cdot 9}$ $\sqrt[3]{-1} \cdot \sqrt[3]{27} \cdot \sqrt[3]{9}$ $-1 \cdot 3\sqrt[3]{9}$ $-3\sqrt[3]{9}$	$\sqrt[3]{-13}$ $\sqrt[3]{-1 \cdot 13}$ $\sqrt[3]{-1} \cdot \sqrt[3]{13}$ $-1 \cdot \sqrt[3]{13}$ $-\sqrt[3]{13}$
$\sqrt[3]{2000}$ $\sqrt[3]{2 \cdot 1000}$ $\sqrt[3]{2} \cdot \sqrt[3]{1000}$ $10\sqrt[3]{2}$	$\sqrt[3]{576}$ $\sqrt[3]{64 \cdot 9}$ $\sqrt[3]{64} \cdot \sqrt[3]{9}$ $4\sqrt[3]{9}$	
$-8\sqrt[3]{144}$ $-8\sqrt[3]{8 \cdot 18}$ $-8\sqrt[3]{8} \cdot \sqrt[3]{18}$ $-8 \cdot 2\sqrt[3]{18}$ $-16\sqrt[3]{18}$	$-13\sqrt[3]{648}$ $-13\sqrt[3]{216 \cdot 3}$ $-13 \cdot \sqrt[3]{216} \cdot \sqrt[3]{3}$ $-13 \cdot 6\sqrt[3]{3}$ $-78\sqrt[3]{3}$	
		$7\sqrt[3]{2048}$ $\sqrt[3]{12 \cdot 4}$ $\sqrt[3]{12} \cdot \sqrt[3]{4}$ $2\sqrt[3]{12} \cdot \sqrt[3]{4}$ $4\sqrt[3]{12}$

Simplifying Cube Roots Choice Board *includes:*

Name: _____ Date: _____ Period: _____

Simplifying Non-Perfect Cubes

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

$\sqrt[3]{54}$	$\sqrt[3]{192}$	$\sqrt[3]{32}$
$\sqrt[3]{-1080}$	$\sqrt[3]{-243}$	$\sqrt[3]{-135}$
$\sqrt[3]{2000}$	$\sqrt[3]{576}$	$\sqrt[3]{128}$
$\sqrt[3]{-1000}$	$\sqrt[3]{-27000}$	$\sqrt[3]{-1000000}$

- ✓ 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

Simplify Non-Perfect Cubes Choice Board

standards covered:

CCSS: HSN-RN.A.2

TEKs: A1.11.A

VA SOLs: EO.A.3.a

Name: _____ Date: _____ Period: _____

ANSWER KEY

Simplifying Non-Perfect Cubes

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

$\begin{array}{l} \sqrt[3]{54} \\ \sqrt[3]{27 \cdot 2} \\ \sqrt[3]{27} \cdot \sqrt[3]{2} \\ 3\sqrt[3]{2} \end{array}$	$\begin{array}{l} \sqrt[3]{192} \\ \sqrt[3]{64 \cdot 3} \\ \sqrt[3]{64} \cdot \sqrt[3]{3} \\ 4\sqrt[3]{3} \end{array}$	$\begin{array}{l} \sqrt[3]{32} \\ \sqrt[3]{8 \cdot 4} \\ \sqrt[3]{8} \cdot \sqrt[3]{4} \\ 2\sqrt[3]{4} \end{array}$
$\begin{array}{l} \sqrt[3]{-1080} \\ \sqrt[3]{-1 \cdot 216 \cdot 5} \\ \sqrt[3]{-1} \cdot \sqrt[3]{216} \cdot \sqrt[3]{5} \\ -1 \cdot 6\sqrt[3]{5} \\ -6\sqrt[3]{5} \end{array}$	$\begin{array}{l} \sqrt[3]{-243} \\ \sqrt[3]{-1 \cdot 27 \cdot 9} \\ \sqrt[3]{-1} \cdot \sqrt[3]{27} \cdot \sqrt[3]{9} \\ -1 \cdot 3\sqrt[3]{9} \\ -3\sqrt[3]{9} \end{array}$	$\begin{array}{l} \sqrt[3]{-135} \\ \sqrt[3]{-1 \cdot 27 \cdot 5} \\ \sqrt[3]{-1} \cdot \sqrt[3]{27} \cdot \sqrt[3]{5} \\ -1 \cdot 3\sqrt[3]{5} \\ -3\sqrt[3]{5} \end{array}$
$\begin{array}{l} \sqrt[3]{2000} \\ \sqrt[3]{2 \cdot 1000} \\ \sqrt[3]{2} \cdot \sqrt[3]{1000} \\ 10\sqrt[3]{2} \end{array}$	$\begin{array}{l} \sqrt[3]{576} \\ \sqrt[3]{64 \cdot 9} \\ \sqrt[3]{64} \cdot \sqrt[3]{9} \end{array}$	$\begin{array}{l} \sqrt[3]{128} \\ \sqrt[3]{64 \cdot 2} \end{array}$

how the choice board resource works

Name: _____ Date: _____ Period: _____

Simplifying Non-Perfect Cubes

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

$\sqrt[3]{54}$	$\sqrt[3]{192}$	$\sqrt[3]{32}$
$\sqrt[3]{-1080}$	$\sqrt[3]{-243}$	$\sqrt[3]{-135}$
$\sqrt[3]{2000}$	$\sqrt[3]{576}$	$\sqrt[3]{128}$
$-8\sqrt[3]{144}$	$-13\sqrt[3]{648}$	$-6\sqrt[3]{320}$

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 non-perfect cube root radicals.

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: _____ <i>Simplifying Non-Perfect Cubes</i> Directions: Choose ____ problems from each column. Show your work in the boxes.		
$\sqrt[3]{54}$ $\sqrt[3]{27 \cdot 2}$ $\sqrt[3]{27} \cdot \sqrt[3]{2}$ $3\sqrt[3]{2}$	$\sqrt[3]{192}$ $\sqrt[3]{64 \cdot 3}$ $\sqrt[3]{64} \cdot \sqrt[3]{3}$ $4\sqrt[3]{3}$	$\sqrt[3]{32}$ $\sqrt[3]{8 \cdot 4}$ $\sqrt[3]{8} \cdot \sqrt[3]{4}$ $2\sqrt[3]{4}$
$\sqrt[3]{-1080}$ $\sqrt[3]{-1 \cdot 216 \cdot 5}$ $\sqrt[3]{-1} \cdot \sqrt[3]{216} \cdot \sqrt[3]{5}$ $-1 \cdot 6\sqrt[3]{5}$ $-6\sqrt[3]{5}$	Name: _____ Date: _____ Period: _____ <i>Simplifying Non-Perfect Cubes</i> Directions: Choose ____ problems from each column. Show your work in the boxes.	
$\sqrt[3]{2000}$ $\sqrt[3]{2 \cdot 1000}$ $\sqrt[3]{2} \cdot \sqrt[3]{1000}$ $10\sqrt[3]{2}$	$\sqrt[3]{54}$	$\sqrt[3]{192}$
$-8\sqrt[3]{144}$ $-8\sqrt[3]{8 \cdot 18}$ $-8\sqrt[3]{8} \cdot \sqrt[3]{18}$ $-8 \cdot 2\sqrt[3]{18}$ $-16\sqrt[3]{18}$	$\sqrt[3]{-1080}$	$\sqrt[3]{-243}$
$4\sqrt[3]{1125}$ $4\sqrt[3]{125 \cdot 9}$ $4\sqrt[3]{125} \cdot \sqrt[3]{9}$ $4 \cdot 5\sqrt[3]{9}$	$\sqrt[3]{2000}$	$\sqrt[3]{576}$
		$\sqrt[3]{32}$
		$\sqrt[3]{-135}$
		$\sqrt[3]{128}$

You may also enjoy ...

SIMPLIFYING RADICALS SQUARE ROOTS Choice Board

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

Simplifying Non-Perfect Squares
Directions: Choose _____ problems from each column. Show your work in the boxes.

$\sqrt{12}$	$\sqrt{18}$ $\sqrt{9 \cdot 2}$ $\sqrt{9} \sqrt{2}$ $3\sqrt{2}$	$\sqrt{12}$ $\sqrt{4 \cdot 3}$ $\sqrt{4} \sqrt{3}$ $2\sqrt{3}$
$\sqrt{200}$	$\sqrt{108}$ $\sqrt{36 \cdot 3}$ $\sqrt{36} \sqrt{3}$ $6\sqrt{3}$	$\sqrt{200}$ $\sqrt{100 \cdot 2}$ $\sqrt{100} \sqrt{2}$ $10\sqrt{2}$
$\sqrt{63}$	$\sqrt{32}$ $\sqrt{16 \cdot 2}$ $\sqrt{16} \sqrt{2}$ $4\sqrt{2}$	$\sqrt{72}$ $\sqrt{36 \cdot 2}$ $\sqrt{36} \sqrt{2}$ $6\sqrt{2}$

Malia Rivera with Ms. Rivera

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SIMPLIFYING RADICALS SQUARES & CUBES Choice Board

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

Simplifying Non-Perfect Squares & Cubes
Directions: Choose _____ problems from each column. Show your work in the boxes.

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

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SIMPLIFYING RADICAL EXPRESSIONS Algebra 2 Guided Notes

SIMPLIFYING RADICAL EXPRESSIONS

$\sqrt[n]{a}$

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

nth roots: If $b^n = a$, then b is an _____ of a.
n is an _____ integer.

a < 0
a = 0
a > 0

SIMPLIFYING RADICAL EXPRESSIONS

The index will tell you how many factors are needed. Ex: 6th root = 6 factors

- No radicals have perfect _____ factors
- No radicals contain fractions _____ powers as factors other than _____
- No radicals are in the denominator _____ of fractions.

radical in simplest form.

2. $\sqrt{10 \cdot 7}$
 $\sqrt{10} \cdot \sqrt{7}$
 $2\sqrt{7}$

3. $\sqrt[3]{128}$
 $\sqrt[3]{32 \cdot 5}$
 $\sqrt[3]{32} \cdot \sqrt[3]{5}$
 $2\sqrt[3]{5}$

Answer key included

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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!

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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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