

keep scrolling to
get a sneak peek!

Help your Algebra students practice **solving radical equations** with this task card activity! Your students are going to love this independent, self-checking activity!

SOLVING RADICAL EQUATIONS

16 Task Cards

ANSWER KEY

Name: _____ Date: _____ Pd: _____

SOLVING RADICAL EQUATIONS RECORDING SHEET

Directions: Solve each radical equation and show your work in the box.

A $(\sqrt{\frac{n}{7}})^2 = (3)^2$
 $\frac{n}{7} = 9$
 $\cdot 7 \cdot 7$
 $n = 63$

B $(\sqrt{27c+9})^2 = (12)^2$
 $27c+9 = 144$
 $-9 \quad -9$
 $27c = 135$
 $\frac{27}{27}$
 $c = 5$

C $(\sqrt{k})^2 = \dots$
Solve the equation. Don't forget to check for extraneous solutions!

D $\sqrt{T} = \sqrt{16 - T}$
Solve the equation. Don't forget to check for extraneous solutions!

E $(9)^2 = (\sqrt{1-8x})^2$
 $81 = 1 - 8x$
 $1 \quad -1$
 $80 = -8x$
 $\frac{-80}{-8}$
 $x = -10$

F $\sqrt{m+11} + 9 = 20$
 $\sqrt{m+11} = (11)^2$
 $m+11 = 121$
 $-11 \quad -11$
 $m = 110$

G $\sqrt{y} = \dots$
 $(\sqrt{y} - 8)^2 = \dots$
 $y - 16\sqrt{y} + 64 = \dots$
 $y = 2$

H Solve the equation. Don't forget to check for extraneous solutions!
 $121 = 11\sqrt{x+3}$
 $121 = x+3$
 $-3 \quad -3$
 $118 = x$

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Answers printed on the back!

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Why do you need this?



Task cards are an effective, low-prep way to create engaging and interactive learning experience



Task cards are very versatile because they cater to a wide range of student needs

Solving Radical Equations Task Cards

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

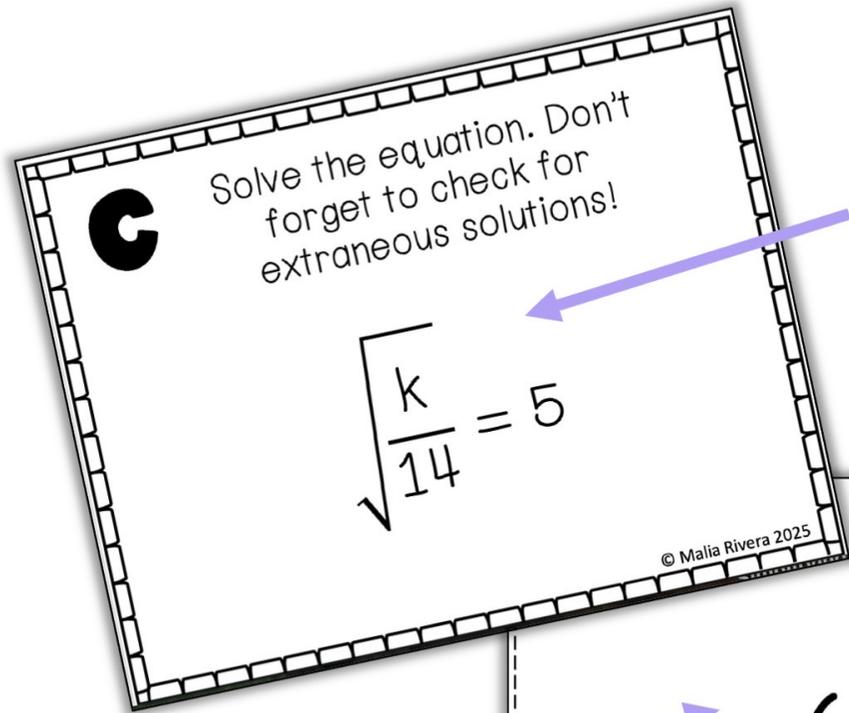
SOLVING RADICAL EQUATIONS RECORDING SHEET

Directions: Solve each radical equation and show your work in the boxes below.

A $(\sqrt{\frac{n}{7}})^2 = (3)^2$ $\frac{n}{7} = 9$ $\cdot 7 \cdot 7$ $n = 63$	B $(\sqrt{27c+9})^2 = (12)^2$ $27c+9 = 144$ $-9 \quad -9$ $27c = 135$ 27 $c = 5$	C	D $(5)^2 = (\sqrt{p-1})^2$
E $(9)^2 = (\sqrt{1-8x})^2$ $81 = 1-8x$ $-1 \quad -1$	F $\sqrt{m+11} + 9 = 20$ $-9 \quad -9$ $(-11)^2 = (11)^2$ $+11 = 121$ $-11 \quad -11$ $m = 110$	G	H Solve the equation. Don't forget to check for extraneous solutions! $121 = 11\sqrt{x+3}$ $\div 11 \quad \div 11$ $y = 24$ $118 = x$

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Solving Radical Equations Task Cards *includes:*



Front with question

Print with answer on back

63

- ✓ set of 16 task cards
- ✓ a recording sheet for students to show their work
- ✓ a detailed answer key
- ✓ Printing tips to print the answers on the back of the corresponding question cards

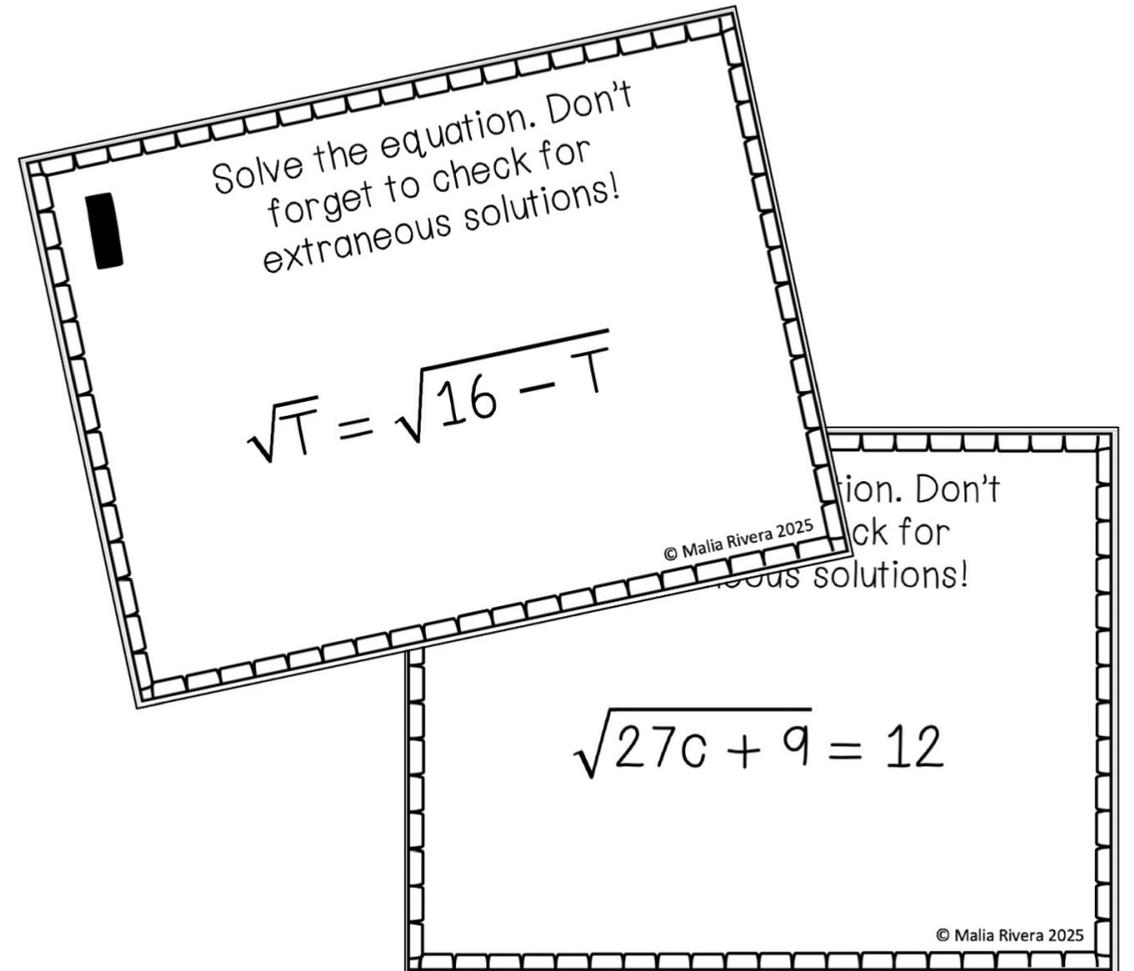
Solving Radical Equations Task Cards

standards covered:

CCSS: HSA-REI.A.2

TEKs: A2.4.F

VA SOLs: EI.All.3.d



how to use this resource

Name: _____ Date: _____ Pd: _____

SOLVING RADICAL EQUATIONS RECORDING SHEET

Directions: Solve each radical equation and show your work in the boxes below.

A	B	C	D
G	H		

TIPS FOR USE

When printing this set of task cards, be sure to select "short-edged binding" when printing on both sides. This will allow the answers to be printing on the back of the corresponding card.

After printing, I highly recommend laminating the task cards to they can be used in the future.

H Solve the equation. Don't forget to check for extraneous solutions!

$$121 = 11\sqrt{x + 3}$$

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This is a great individual practice activity to use when reviewing how to solve radical equations.

You can also use this in small groups, match centers, or as a scavenger hunt.

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

You may also enjoy ...

SOLVING RADICAL EQUATIONS

Algebra 2 Guided Notes

SOLVING RADICAL EQUATIONS
Solve each equation. Be sure to check for extraneous solutions!

Example 1: $\sqrt{x+3} = 4$
 $(\sqrt{x+3})^2 = 4^2$
 $x+3 = 16$
 $x = 13$
 Check: $\sqrt{13+3} = \sqrt{16} = 4$ ✓

Example 2: $\sqrt{4x-1} = 3$
 $(\sqrt{4x-1})^2 = 3^2$
 $4x-1 = 9$
 $4x = 10$
 $x = \frac{5}{2}$
 Check: $\sqrt{4(\frac{5}{2})-1} = \sqrt{10-1} = \sqrt{9} = 3$ ✓

Steps for Solving Radical Equations
 Step 1: Isolate the expression with the radical on one side of the equation.
 Step 2: Raise both sides of the equation to the power that eliminates the radical, or eliminate the radical.
 Step 3: Check your solution(s)! Make sure to check for extraneous solutions. (When you plug it back in and get a false statement, it is an extraneous solution.)

Directions: Solve each equation. Be sure to check for extraneous solutions!

- $x^2 - 4 = 0$
- $x^2 + 13 = 17$
- $(x-2)^2 = 9$
- $\sqrt{4x-1} = 3$
- $\sqrt{x+3} = 4$
- $\sqrt{4x-1} = 3$

Answer key included
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SOLVING RADICAL EQUATIONS

collaborative Tessellation

SOLVING RADICAL EQUATIONS
Solve each radical equation. Show your work.

Question	Answer
$\sqrt{x+3} = 4$	
$\sqrt{2x-1} = 3$	
$\sqrt{x+2} + 2 = 5$	
$x = \sqrt{3x+4}$	
$2\sqrt{x-3} + 5 = 11$	
$-2 = -4 + \sqrt{2x+1}$	
$\sqrt{2x+3} = \sqrt{5x-7}$	
$\sqrt{x+4} = \sqrt{2x-1}$	
$-3\sqrt{x+2} = -12$	
$\sqrt{3x+7} = x+1$	

christmas santa bulletin board
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SOLVING RADICAL EQUATIONS

Directions: Solve each radical equation. If there is more than one answer, write it least to greatest with a comma to separate them. Do not use spaces in your answer. EX: -2,3

Question	Answer
$\sqrt{x+3} = 4$	
$\sqrt{2x-1} = 3$	
$\sqrt{x+2} + 2 = 5$	
$x = \sqrt{3x+4}$	
$2\sqrt{x-3} + 5 = 11$	
$-2 = -4 + \sqrt{2x+1}$	
$\sqrt{2x+3} = \sqrt{5x-7}$	
$\sqrt{x+4} = \sqrt{2x-1}$	
$-3\sqrt{x+2} = -12$	
$\sqrt{3x+7} = x+1$	

Self-Checking
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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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