

keep scrolling to  
get a sneak peek!

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

# SOLVING ABSOLUTE VALUE EQUATIONS

20 Task Cards

Name: **Answer Key** Date: \_\_\_\_\_ Pd: \_\_\_\_\_

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

**A**  $4|x+8|=56$   
 $|x+8|=14$   
 $x+8=14$  or  $x+8=-14$   
 $x=6$  or  $x=-22$

**B**  $|4x-7|=3$   
 $4x-7=3$  or  $4x-7=-3$   
 $4x=10$  or  $4x=4$   
 $x=2\frac{1}{2}$  or  $x=1$

**C**  $|1-2x+11|=5$   
 $1-2x+11=5$  or  $1-2x+11=-5$   
 $12-2x=5$  or  $12-2x=-5$   
 $-2x=-7$  or  $-2x=-17$   
 $x=3\frac{1}{2}$  or  $x=8\frac{1}{2}$

**D**  $3|-8x|+8=80$   
 $3|-8x|=72$   
 $|-8x|=24$   
 $-8x=24$  or  $-8x=-24$   
 $x=-3$  or  $x=3$

**E**  $|x+8|-5=2$   
 $|x+8|=7$   
 $x+8=7$  or  $x+8=-7$   
 $x=-1$  or  $x=-15$

**F**  $16-3|x|=6$   
 $-3|x|=-10$   
 $|x|=\frac{10}{3}$   
 $x=\frac{10}{3}$  or  $x=-\frac{10}{3}$

**G** Solve the equation.  
 $\frac{17x+4}{8}=3$

**H** Solve the equation.  
 $2-5|5x-5|$

**I** Solve the equation.  
 $4|x+8|=56$

**J** Solve the equation.

**K** Solve the equation.

**L** Solve the equation.

**M** Solve the equation.

**N** Solve the equation.

**O** Solve the equation.

**P** Solve the equation.

**Q** Solve the equation.

**R** Solve the equation.

**S** Solve the equation.

**T** Solve the equation.

**U** Solve the equation.

**V** Solve the equation.

**W** Solve the equation.

**X** Solve the equation.

**Y** Solve the equation.

**Z** Solve the equation.

Math with Ms. Rivera

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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 Absolute Value Equations Task Cards

Name: **Answer Key** Date: \_\_\_\_\_ Pd: \_\_\_\_\_

## SOLVING ABSOLUTE VALUE EQUATIONS RECORDING SHEET

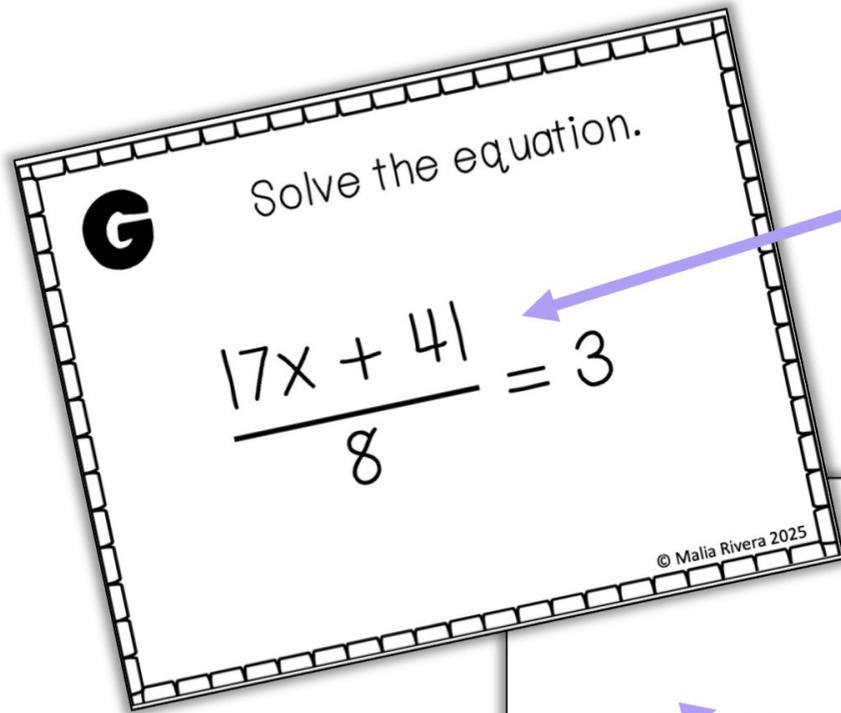
Directions: Solve each absolute value equation and show your work in the boxes below.

<b>A</b> $4 x+8 =56$ $ x+8 =14$ $x+8=14$ $x+8=-14$ $x=6$ $x=-22$	<b>B</b> $ 4x-7 =3$ $4x-7=3$ $4x-7=-3$ $4x=10$ $4x=4$ $x=5/2$ $x=1$	<b>C</b> $1-2x$ $1$ $-2x$	<b>D</b> $15x-5 +2=17$ $-2$ $-2$ $-6$
<b>E</b> $3 -8x +8=80$ $-8$ $-8$ $3 -8x =72$	<b>F</b> $ x+8 -5=2$ $+5$ $+5$ $ x+8 =7$ $x+8=-7$ $-8$ $-8$ $x=-15$	<b>G</b> $7x+4=24$ $-4$ $-4$ $7x=20$ $7$ $x=20/7$ $7x+4=-24$ $-4$ $-4$ $7x=-28$ $7$ $x=-4$	$6-3x=6$ $-6$ $-6$ $-3x=0$ $-3$ $-3$ $x=0$ $6-3x=0$ $-6$ $-6$ $-3x=-12$ $-3$ $-3$ $x=4$

**J** Solve the equation.  
 $2 - 5|5x - 5| = -73$

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# Solving Absolute Value Equations Task Cards *includes:*



Front with question

Print with answer on back

$$x = 0, 3$$

- ✓ set of 20 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

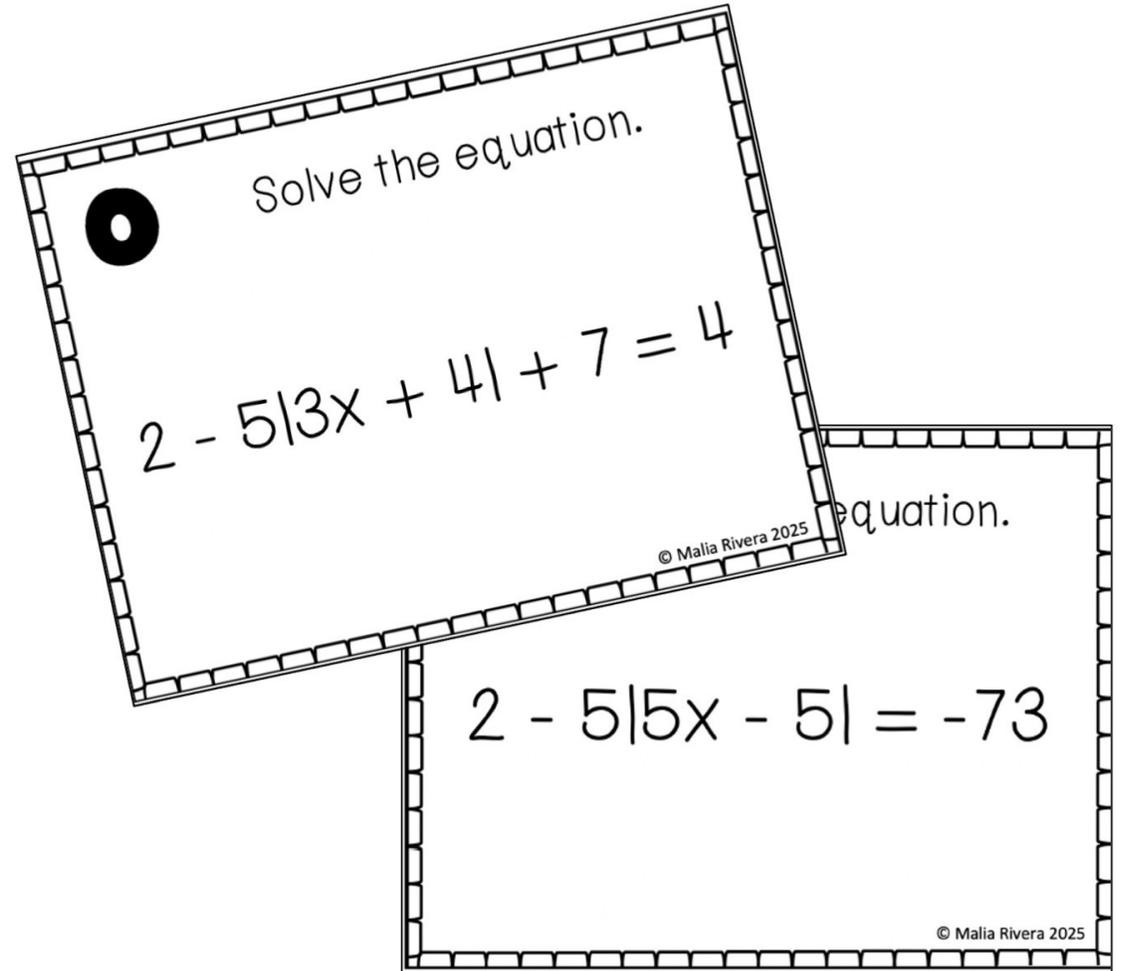
# Solving Absolute Value Equations Task Cards

standards covered:

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

**TEKs:** A2.6.E

**VA SOLs:** EI.All.3.a



# how to use this resource

## SOLVING ABSOLUTE VALUE EQUATIONS RECORDING SHEET

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

I	J	K	L
	O	P	

## 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.

their work on  
to can

**A** Solve the equation.

$$4|x + 8| = 56$$

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This is a great individual practice activity to use when reviewing how to solve absolute value 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 ABSOLUTE VALUE EQUATIONS

Differentiated circuit worksheet

**ABSOLUTE VALUE EQUATIONS CIRCUIT**  
 Date: \_\_\_\_\_  
 This is a circuit that starts and ends at the same place. Start in the first box labeled 1 and solve the problem. Search through the remaining boxes for the answer you got for question 1. Search through the remaining boxes for the answer you got for question 2. Continue until you have completed the questions and you are back to the original question. Record your path below.

**SOLVING ABSOLUTE VALUE EQUATIONS**  
 Directions: A circuit is a route that starts and ends at the same place. Start in the first box labeled 1 and solve the problem. Search through the remaining boxes for the answer you got for question 1. Now complete that question. Continue until you have completed the questions and you are back to the original question. Record your path below.

1 → 9 → 5 → 7 → 2 → 10 → 4 → 8 →

Previous Answer:  $x = -5/2, 7/2$

2. Solve:  $\frac{12x + 41}{2} + 1 = 7$

Previous Answer:  $x = -5/2, -1/2$

4. Solve:  $12x + 31 = -7$

Previous Answer:  $x = -4, 12$

3. Solve:  $13x - 21 = 7$

Previous Answer:  $x = -3, -2$

1. Solve:  $|x - 5| = 9$

$x - 5 = 9$       $x - 5 = -9$

$+5$       $+5$

$x = 14$       $x = -4$

2. Solve:  $|x + 3| = 7$

$x + 3 = 7$       $x + 3 = -7$

$-3$       $-3$

$x = 4$

2 versions + Answer key included

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## SOLVING ABSOLUTE VALUE EQUATIONS & INEQUALITIES

Algebra 2 Guided Notes

**SOLVING ABSOLUTE VALUE EQUATIONS**  
 The absolute value of a number,  $a$ , written  $|a|$ , is the distance from  $a$  to 0 on the number line.  
 Example: Solve  $|x| = 5$ . The distance from  $x$  to 0 is 5.  
 The equation  $|ax + b| = c$  where  $c \geq 0$  is equivalent to  $ax + b = c$  or  $ax + b = -c$ .

**SOLVING ABSOLUTE VALUE INEQUALITIES**  
 In the inequalities above,  $<$  can be replaced with  $\leq$  and  $>$  can be replaced with  $\geq$ .

1.  $|x - 8| + 10 \geq 15$      Circle one:      $|3x - 11| - 4 < 12$      Circle one:

AND     OR     AND     OR

OR     AND

2.  $|x - 4| = 15$

3.  $|x - 8| + 10 \geq 15$

4.  $|3x - 11| - 4 < 12$

5.  $|x - 4| = 15$

6.  $|x - 8| + 10 \geq 15$

7.  $|3x - 11| - 4 < 12$

8.  $|x - 4| = 15$

9.  $|x - 8| + 10 \geq 15$

10.  $|3x - 11| - 4 < 12$

Answer key included

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## SOLVING ABSOLUTE VALUE EQUATIONS

**Solving Absolute Value Equations**  
 Directions: Answer each question and type the question number with the matching answer in the answer column to the right.

Question	Answer
1. $ x - 3  = 7$	-16, -4
2. $2 x + 1  = 16$	-17, -11
3. $ x + 14  = 3$	-6, 1
4. $-3 x - 5  = -15$	-2, 18
5. $ 2x + 5  = 7$	-10/3, 4
6. $ x + 10  - 7 = -1$	-9, 7
7. $ 3x - 11  + 8 = 19$	-15, -9
8. $-2 x + 12  = -6$	-7/3, 7
9. $2 3x - 7  + 3 = 31$	-4, 10

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Self-Checking



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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