



**Inclement Weather  
Resources  
Mathematics  
Algebra I**

**The Department of Curriculum  
&  
Instruction**

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Hello MSCS Family,

This resource packet was designed to provide students with activities that can be completed at home independently or with the guidance and supervision of family members or other adults. The activities are aligned with the TN Academic Standards for Mathematics and will provide additional practice opportunities for students to develop and demonstrate their knowledge and understanding.

A suggested pacing guide is included; however, students can complete the activities in any order over the course of several days. Below is a table of contents which lists each activity.

**Table of Contents**

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Solving Equations with a Variable on Both Sides	3	Day 1
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Answer Key	7	Day 1 & 2

<b>Day 1: Solving Equations with a Variable on Both Sides</b>	
<b>Grade Level Standard(s)</b>	<p><b>A1.N.Q.A.1</b> Use units as a way to understand real-world problems.</p> <p>c. Define and justify appropriate quantities within a context for the purpose of modeling.</p>
<b>Caregiver Support Option</b>	<p>The student may use a sibling or a guardian as a partner. For additional support, have the student access the video links below by logging into iReady from their Clever account.</p> <p style="text-align: center;"> <a href="#">Video 1</a>      <a href="#">Video 2</a> </p>
<b>Materials Needed</b>	Paper, pencil, calculator
<b>Question(s) to Explore</b>	<p>How do you solve an equation that has variables on both sides and grouping symbols?</p> <p>How do you solve a word problem using an equation with variables on both sides?</p>



# 1-3 Mathematical Literacy and Vocabulary

## Solving Equations With a Variable on Both Sides

Choose the word(s) that best matches the phrase or completes the sentence.

equation

identity

infinitely many solutions

no solution

variable

solution

1. If an equation is true for all values of the variable, then it has \_\_\_\_\_.
2. Any value that makes an equation true is a(n) \_\_\_\_\_.
3. A mathematical sentence that states two quantities are equal is called a(n) \_\_\_\_\_.
4. An equation that is true for all values of the variable is called a(n) \_\_\_\_\_.
5. If there is no value of  $x$  that makes the equation true, the equation has \_\_\_\_\_.
6. A symbol, usually a letter, that represents one or more numbers is called a \_\_\_\_\_.

Circle all the variables in the equation.

7.  $9w - 7 = 3w + 23$

8.  $(5 - 6t) = \frac{t}{5} + 7$

Identify whether each equation has one solution, no solution, or infinitely many solutions.

9.  $3 - x = x - 3$  \_\_\_\_\_

10.  $4x - 8 = 4(x - 2)$  \_\_\_\_\_

11.  $5(1 - x) = 5 + 5x$  \_\_\_\_\_

12.  $x + 2(x - 7) = 3x - 7$  \_\_\_\_\_

**Multiple Choice**

13. Which of the following is an equation?

(A)  $3x - 6$

(B)  $5m$

(C)  $7w + 4 = 25$

(D)  $48 + 27y$

<b>Day 2: Solving Inequalities in One Variable</b>	
<b>Grade Level Standard(s)</b>	<b>A1.A.CED.A.1</b> Create equations and inequalities in one variable and use them to solve problems in a real-world context.
<b>Caregiver Support Option</b>	<p>The student may use a sibling or a guardian as a partner. For additional support, have the student access the video link below by logging into iReady from their Clever account.</p> <p style="text-align: center;"> <a href="#">Video 1</a>      <a href="#">Video 2</a> </p>
<b>Materials Needed</b>	Paper, pencil, calculator
<b>Question(s) to Explore</b>	<p>How do you solve and graph a two-step inequality?</p> <p>How do you solve a word problem by writing an inequality?</p>



# 1-5 Mathematical Literacy and Vocabulary

## Solving Inequalities in One Variable

For Items 1–5, draw a line from the inequality in Column A to a possible matching verbal expression in Column B. The first one is done for you.

### Column A

1.  $t > 42$

2.  $s \leq 55$

3.  $n - 3 > 9$

4.  $x < -5$

5.  $f < 3$

### Column B

3 less than a number  $n$  is greater than 9 $x$  is less than negative 5

The length of the fish is under 3 feet.

the speed limit is less than or equal to 55 miles per hour

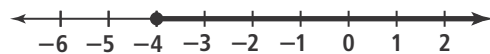
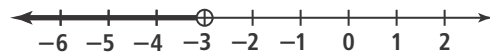
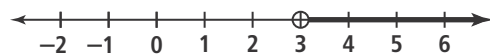
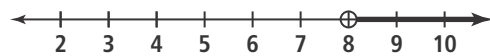
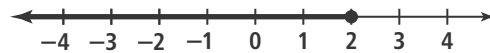
must be over 42 inches tall to ride

For Items 6–10, draw a line from each verbal expression in Column A to its graph in Column B.

### Column A

6.  $p$  is greater than 37.  $g$  is greater than or equal to  $-4$ 8.  $b$  is less than or equal to 29. the quotient of  $r$  and 4 is greater than 210.  $v$  is less than  $-3$ 

### Column B



# Answer Key

## Solving Equations with a Variable on Both Sides

Name \_\_\_\_\_

enVision Algebra 1

SevensRealize.com

### 1-3 Mathematical Literacy and Vocabulary

#### Solving Equations With a Variable on Both Sides

Choose the word(s) that best matches the phrase or completes the sentence.

equation	identity	infinitely many solutions
no solution	variable	solution

1. If an equation is true for all values of the variable, then it has infinitely many solutions.
2. Any value that makes an equation true is a(n) solution.
3. A mathematical sentence that states two quantities are equal is called a(n) equation.
4. An equation that is true for all values of the variable is called a(n) identity.
5. If there is no value of  $x$  that makes the equation true, the equation has no solution.
6. A symbol, usually a letter, that represents one or more numbers is called a variable.

Circle all the variables in the equation.

7.  $9w - 7 = 3w + 23$
8.  $(5 - 6t) = \frac{t}{5} + 7$

Identify whether each equation has one solution, no solution, or infinitely many solutions.

9.  $3 - x = x - 3$  one solution
10.  $4x - 8 = 4(x - 2)$  infinitely many solutions
11.  $5(1 - x) = 5 + 5x$  no solution
12.  $x + 2(x - 7) = 3x - 7$  one solution

Multiple Choice

13. Which of the following is an equation?  
 (A)  $3x - 6$   
 (B)  $5m$   
 (C)  $7w + 4 = 25$   
 (D)  $48 + 27y$

## Solving Inequalities in One Variable

Name \_\_\_\_\_

enVision Algebra 1

SevaatRealize.com

### 1-5 Mathematical Literacy and Vocabulary

#### Solving Inequalities in One Variable

For Items 1–5, draw a line from the inequality in Column A to a possible matching verbal expression in Column B. The first one is done for you.

Column A

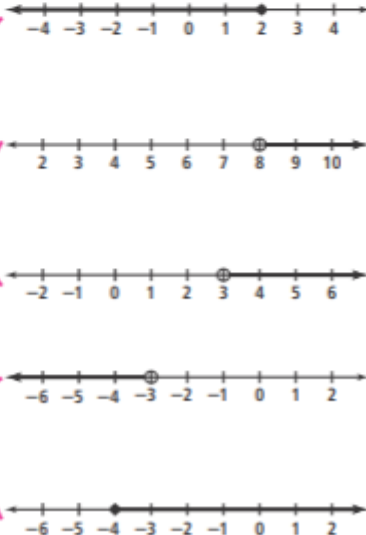
Column B

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. <math>t &gt; 42</math></li> <li>2. <math>s \leq 55</math></li> <li>3. <math>n - 3 &gt; 9</math></li> <li>4. <math>x &lt; -5</math></li> <li>5. <math>f &lt; 3</math></li> </ol> | <ol style="list-style-type: none"> <li>3 less than a number <math>n</math> is greater than 9</li> <li><math>x</math> is less than negative 5</li> <li>The length of the fish is under 3 feet.</li> <li>the speed limit is less than or equal to 55 miles per hour</li> <li>must be over 42 inches tall to ride</li> </ol> |
|---|---|

For Items 6–10, draw a line from each verbal expression in Column A to its graph in Column B.

Column A

Column B

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>6. <math>p</math> is greater than 3</li> <li>7. <math>g</math> is greater than or equal to <math>-4</math></li> <li>8. <math>b</math> is less than or equal to 2</li> <li>9. the quotient of <math>r</math> and 4 is greater than 2</li> <li>10. <math>v</math> is less than <math>-3</math></li> </ol> |  <p>The number lines in Column B are:</p> <ul style="list-style-type: none"> <li>Line 1: Number line from -4 to 4 with an open circle at 2 and a ray pointing to the left.</li> <li>Line 2: Number line from 2 to 10 with a closed circle at 8 and a ray pointing to the right.</li> <li>Line 3: Number line from -2 to 6 with a closed circle at 3 and a ray pointing to the right.</li> <li>Line 4: Number line from -6 to 2 with an open circle at -3 and a ray pointing to the left.</li> <li>Line 5: Number line from -6 to 2 with a closed circle at -4 and a ray pointing to the left.</li> </ul> |
|--|--|