



Objective: REVIEW

Use Equations to Solve Problems and Inequalities

You can write an equation to help you solve a word problem by choosing a variable to represent the unknown quantity.

An **inequality** is a mathematical statement that compares two expressions and includes an inequality symbol. The different inequality symbols are shown below.

$>$ means "**is greater than.**" \geq means "**is greater than or equal to.**"

$<$ means "**is less than.**" \leq means "**is less than or equal to.**"



- After Kwan spent \$5 dollars of the money he earned for mowing lawns, he had \$15 left. Let m equal the amount Kwan earned mowing lawns. Which shows the equation that represents the situation and the amount Kwan earned mowing lawns?
 - $m - 5 = 15$; \$20
 - $m + 5 = 15$; \$20
 - $5m = 15$; \$3
 - $\frac{m}{5} = 15$; \$75
- Pete has 4 times as many model cars as Steve. Pete has 24 model cars. Let s equal the number of model cars Steve has. Which shows the equation that represents the situation and the number of model cars Steve has?
 - $\frac{s}{4} = 24$; 96 model cars
 - $24s = 4$; $\frac{1}{6}$ model car
 - $4s = 24$; 6 model cars
 - $s + 4 = 24$; 20 model cars
- Kristin worked a total of 10 hours over two days. She worked 6 hours the first day and h hours the second day. Which shows the equation that represents the situation and the number of hours she worked the second day?
 - $6h = 10$; 1.5 hours
 - $\frac{h}{10} = 6$; 60 hours
 - $h - 6 = 10$; 16 hours
 - $6 + h = 10$; 4 hours
- Patel has 5 less than 4 times as many trophies as Horatio. He has 19 trophies in all. How many trophies does Horatio have?
 - 3
 - 6
 - 71
 - 91

10. Two hundred thirty students went on a field trip. Six buses were filled, and fourteen students rode in cars. Circle the answer that makes the statement true.

The equation

$6s - 14 = 230$
$6s + 14 = 230$
$14s - 6 = 230$
$14s + 6 = 230$

can be used to find the number of students s on each bus.

There were

14
36
38
40

students on each filled bus.

11. Kerri had 40 apples. She gave two apples to each of her friends. She had 10 apples left over. Let f be the number of Kerri's friends. Use items from the box to complete the statements shown below.

One side of the equation is _____.

The other side of the equation is _____.

Kerri gave apples to _____ friends.

15
25
40
50
$2f - 10$
$2f + 10$
$10f - 2$
$10f + 2$



1. Which inequality best represents this phrase?

a number greater than -1

- A. $x > -1$
- B. $x < -1$
- C. $x \geq -1$
- D. $x \leq -1$

2. Which inequality best represents this phrase?

a number less than or equal to 0

- A. $n = 0$
- B. $n < 0$
- C. $n \leq 0$
- D. $n \geq 0$

3. Five friends had lunch together. Their total bill was x dollars, including tax and tip. They shared the cost equally and each friend paid less than $\$10$. Which inequality shows the possible solutions for x , the total amount of the bill?

- A. $x > 50$
- B. $x < 50$
- C. $x \geq 50$
- D. $x \leq 50$

4. A red block and a blue block are on a scale. The red block weighs 9 ounces. The total weight of both blocks is at most 16 ounces. Which inequality best represents b , the possible weight of the blue block in ounces?

- A. $b \geq 7$
- B. $b \leq 7$
- C. $b \geq 25$
- D. $b \leq 25$




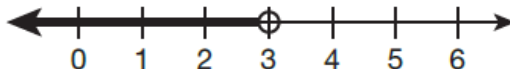
5. Which number is **not** a solution for the inequality below?

$$\frac{x}{2} \geq 12$$

- A. 6
- B. 24
- C. 25
- D. 100

6. Which graph shows the solution set for this inequality?

$$r + 9 < 12$$

- A. 
- B. 
- C. 
- D. 

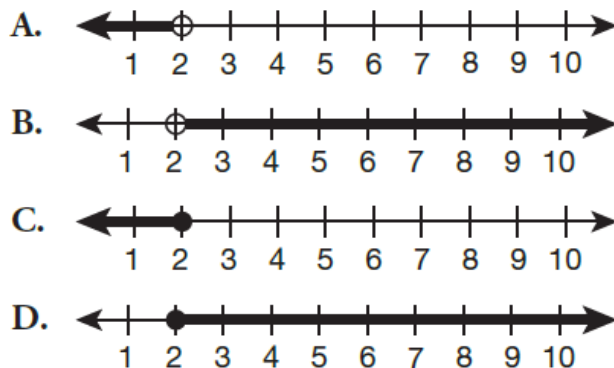
7. Which number is a solution for the inequality below?

$$3n < 18$$

- A. 0
- B. 6
- C. 12
- D. 18

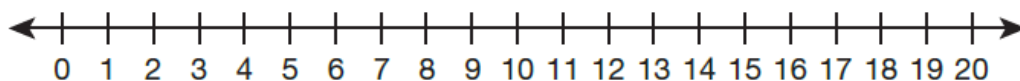
8. Which graph shows the solution set for this inequality?

$$8z \geq 16$$



9. Mrs. Perry hires a landscaper that charges \$15 per hour. The landscaper says that the total charge for the work Mrs. Perry wants done will be at least \$120.
- A. Write an inequality to show h , the number of hours it may take for the landscaper to do the work for Mrs. Perry. Solve the inequality and show your work below.

- B. Graph the inequality on the number line below. Then use the graph to explain if it could take the landscaper 9.5 hours to complete the work for Mrs. Perry.



10. Bruce earns \$12 an hour. Last week, he made more than \$156. Circle the number(s) of hours that Bruce could have worked.
- A. 9
 - B. 11
 - C. 13
 - D. 14
 - E. 16

11. Circle the inequality that makes the statement true.

The inequality

$n < 14$
$n \leq 14$
$n > 14$
$n \geq 14$

represents the phrase “a number is at most 14.”

12. Write each number in the correct box.

12	25	14	17	20	19
----	----	----	----	----	----

Solution of $q + 4 < 23$	NOT a Solution of $q + 4 < 23$



LESSON SE 3c



Objective

Vivian recorded the number of miles she ran in a 13-mile race and the time it took her. Shown below is a partial table. Vivian drew a graph relating the miles that she ran and their related times. Write each ordered pair in the correct box.

Minutes Per Mile

Number of Miles	Number of Minutes
2	10
3	15
4	20

(1, 4)

(5, 25)

(6, 28)

(7, 35)

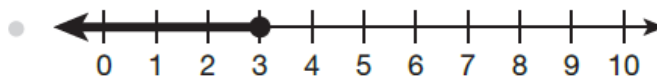
(8, 40)

(9, 50)

Points on Graph	Points NOT on Graph

Draw a line from each inequality to the graph of its solution.

A. $4x > 12$ ●



B. $3x \geq 9$ ●



C. $x - 1 < 2$ ●



D. $x + 7 \leq 10$ ●

