

Advanced  
Math (Tier II)  
6<sup>th</sup> grade  
Copes

NTI DAY #7  
(weather-closed school day)

PACKET  
SEVEN  
(Math)

General Directions:

Due to weather, Harrison County Schools are closed. In an effort to utilize this day on the school calendar, your child is assigned and should work on this "packet" of school work today. It will count as a grade for this subject. The work attached is specific to the subject listed above. Please contact your child's teacher of this subject at ~~234-7110~~ in the event you/your student have questions on this packet. Staff and teachers reported to HCMS today and are available should you have questions.

While this is DUE no later than the last school day before the 3<sup>rd</sup> nine-weeks ends, we **strongly encourage** students to turn it in to their teacher as soon as it's complete (soon after the NTI day) to avoid it being lost, eaten by the family pet, burned to keep warm, etc ☺

234-7123



Name : \_\_\_\_\_ Score : \_\_\_\_\_

Teacher : \_\_\_\_\_ Date : \_\_\_\_\_

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**Circle the Greatest Integer**

1 ) -3    0    9    -1            2 ) 1    4    -3    -7

3 ) 6    -7    -9    -3            4 ) 4    -6    9    2

5 ) 4    6    1    3            6 ) -3    0    6    1

7 ) -2    2    -1    -7            8 ) 7    8    0    9

9 ) -3    -4    -6    3            10 ) 5    -1    -8    4

11 ) -5    -4    7    9            12 ) -3    7    -7    -8

13 ) -5    -8    0    4            14 ) 9    -4    6    -1

15 ) 7    6    4    -5            16 ) -3    -5    7    4



Write an integer to describe each situation.

① A deposit of fifty dollars  
\_\_\_\_\_

② A withdrawal of twenty dollars  
\_\_\_\_\_

③ A decrease in profits of \$300  
\_\_\_\_\_

④ Sixteen degrees below zero  
\_\_\_\_\_

⑤ 1,200 meters above sea level  
\_\_\_\_\_

⑥ A Increase in profits of \$500  
\_\_\_\_\_

56 meters below sea level  
\_\_\_\_\_

A positive charge of 6  
\_\_\_\_\_

Complete.

⑦ integer: \_\_\_\_\_

opposite: +9

absolute value: \_\_\_\_\_

⑧ integer: +8

opposite: \_\_\_\_\_

absolute value: \_\_\_\_\_

⑨ integer: -94

opposite: \_\_\_\_\_

absolute value: \_\_\_\_\_

⑩ integer: \_\_\_\_\_

opposite: -2

absolute value: \_\_\_\_\_

⑪ integer: -15

opposite: \_\_\_\_\_

absolute value: \_\_\_\_\_

⑫ integer: +72

opposite: \_\_\_\_\_

absolute value: \_\_\_\_\_

⑬ integer: \_\_\_\_\_

opposite: +200

absolute value: \_\_\_\_\_

⑭ integer: +60

opposite: \_\_\_\_\_

absolute value: \_\_\_\_\_

⑮ integer: +19

opposite: \_\_\_\_\_

absolute value: \_\_\_\_\_



What are negative integers? Explain.



Solve.

- 1 What integer would represent "ten degrees below zero"?
- 2 What integer would represent "twenty-two hundred feet above sea level"?
- 
- 3 What is the opposite of 8?
- 4 What is the opposite of -45?
- 
- 5 What is the absolute value of -12?
- 6 What is the absolute value of -674?

Circle the letter for the correct answer.

- 7 Which of the following is not an integer?
- a) 5  
b) 0  
c) 0.2  
d) -2
- 8 Which integer has an opposite of 9?
- a) 0.9  
b) 90  
c) -9  
d)  $\frac{1}{9}$

Name:

# Equations

Date:

①  $y + 28 = 28$

②  $z - 7 = 47$

③  $46 + m = 100$

④  $y + 19 = 41$

⑤  $a - 17 = 25$

⑥  $t - 2 = 67$

⑦  $27b = 81$

⑧  $7m = 112$

⑨  $48x = 96$

⑩  $\frac{h}{60} = 2$

⑪  $\frac{b}{2} = 167$

⑫  $\frac{q}{15} = 4$

⑬  $p + 5 = 11$

⑭  $x + 78 = 114$

⑮  $a - 36 = 100$

⑯  $s - 11 = 28$

⑰  $\frac{y}{2} = 266$

⑱

OVER →

① Which of the following is NOT an equation?

- Ⓐ  $3+m$  Ⓑ  $x-3=12$   
Ⓒ  $5 \div 1 = 5$  Ⓓ  $4-3=1$

② For which equation is true for  $x=10$ ?

- Ⓐ  $\frac{x}{2} = 5$  Ⓑ  $2x = 5$   
Ⓒ  $x+5=20$  Ⓓ  $\frac{x}{4} = 40$

③ Which equation is true for  $n=8$ ?

- Ⓐ  $n+2=8$  Ⓑ  $n+1=7$   
Ⓒ  $n+0=8$  Ⓓ  $n-1=9$

④ For which value of the variable is the equation true?

$$67 - x = 50$$

- Ⓐ  $x=14$  Ⓑ  $x=15$   
Ⓒ  $x=16$  Ⓓ  $x=17$

# Equations and Inequalities

(You may show work in the white space beside each problem.)

Name \_\_\_\_\_

Date \_\_\_\_\_

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

$$\frac{x}{4} \geq 20$$

- A. 6  
B. 16  
C. 25  
D. 90
2. Angelina wants to buy a pair of jeans and a sweater that costs \$38. She does not want to spend more than \$80 for the jeans and the sweater. Which inequality best represents  $j$ , the amount that Angelina can spend on the jeans?

- A.  $j > 42$   
B.  $j \geq 42$   
C.  $j < 42$   
D.  $j \leq 42$

3. What is the value of  $y$  in the following equation?

$$\frac{1}{3}y = 9$$

- A. 3  
B. 9  
C. 27  
D. 81

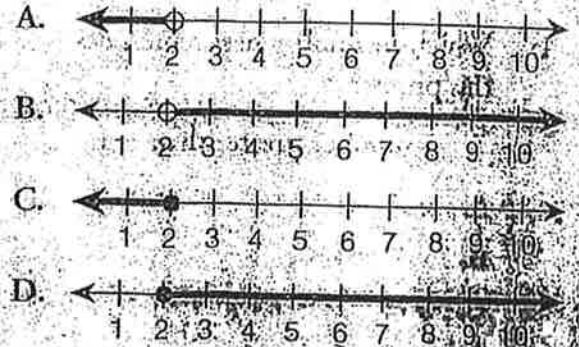
4. Which inequality best represents this phrase?

a number greater than -1

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

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

$$8z \geq 16$$



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

$$3n < 18$$

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

7. 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.  $x \geq 50$

8. 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.  $n \geq 0$



9. 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.  $b \leq 25$

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

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

A. 6

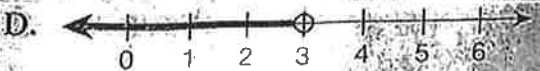
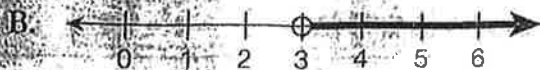
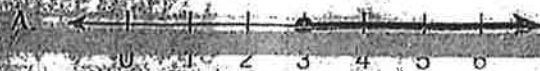
B. 24

C. 25

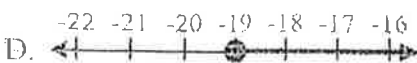
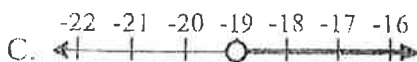
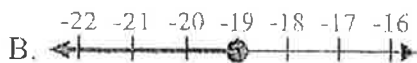
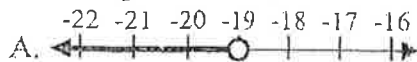
D. 100

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

$$b + 9 \leq 12$$



12. Which option best shows  $X < -19$



13. What is the value of the expression  $2x + 3y$  when  $x = 4$  and  $y = 5$ ?

A. 5

B. 11

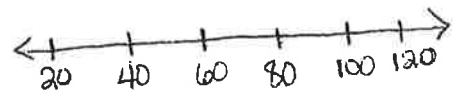
C. 22

D. 23

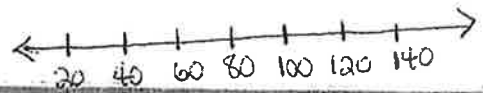
Solve the inequalities

Graph the inequalities

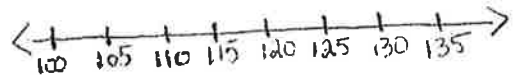
14.  $\frac{1}{4}b \geq 10$



15.  $h - 30 \leq 50$

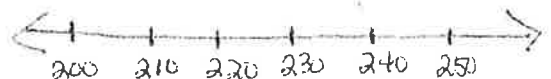


16.  $\frac{k}{5} \leq 25$



Solve and Graph the EQUATION

17.  $g - 55 = 154$



# Lesson 1.7 Greatest Common Factor

A **factor** is a divisor of a number. (For example, 3 and 4 are both factors of 12.) A **common factor** is a divisor that is shared by two or more numbers (1, 2, 4, and 8). The **greatest common factor** is the largest common factor shared by the numbers (8).

To find the greatest common factor of 32 and 40, list all of the factors of each.

$$32 \begin{cases} 1 \times 32 \\ 2 \times 16 \\ 4 \times 8 \end{cases} 1, 2, 4, 8, 16, \text{ and } 32$$

$$40 \begin{cases} 1 \times 40 \\ 2 \times 20 \\ 4 \times 10 \\ 5 \times 8 \end{cases} 1, 2, 4, 5, 8, 10, 20, \text{ and } 40$$

The greatest common factor is 8.

List the factors of each number below. Then, list the common factors and the greatest common factor.

	Factors	Common Factors	Greatest Common Factor
1.	8 _____ 12 _____	_____	_____
2.	6 _____ 18 _____	_____	_____
3.	24 _____ 15 _____	_____	_____
4.	4 _____ 6 _____	_____	_____
5.	5 _____ 12 _____	_____	_____
6.	16 _____ 12 _____	_____	_____