

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

# NTI DAY #2

(weather-closed school day)

# PACKET

# TWO

Advanced  
(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 234-7123 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

Dear amazing students,

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I'm sad that I don't get to spend this day with you at school but there's nothing like doing some math in your pj's curled up at home. ☺ Sometimes us grown-ups get just as excited about snow days. ☺☺ I hope you take time to sleep in and enjoy your day but don't forget to complete your math assignments.

These items are review of rational and irrational numbers and the last page may have a sprinkle of new content that we may not have covered much before this snow day. Try it anyway! Then you can bring those questions to class or if you just can't wait, you can contact me during school hours. (I'm only one call away... or email.) I can't wait to hear from you!

Happy reviewing and I can't wait to hear about your many snow adventures.

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Sincerely,

*Mrs. Persinger*

SEVENTH GRADE MAROON STUDENTS ROCK!

& Of Course my gold  
advanced students  
do as well



## Review

Choose the best answer.

1. Which number is irrational?

A.  $-\frac{213}{2}$

B.  $3.\overline{12}$

C.  $\sqrt{64}$

D. 9.31307...

2. Which is the best approximation for  $\sqrt{55}$ ?

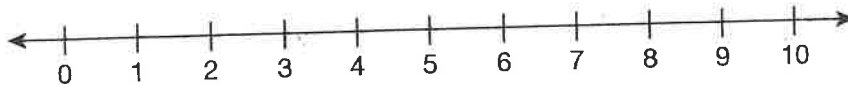
A. 7

B. 7.41

C. 7.42

D. 8

3. Plot  $\sqrt{51}$  on the following number line.



Complete each sentence.

4.  $\sqrt{144}$  is rational because \_\_\_\_\_.

5.  $10\pi$  is irrational because \_\_\_\_\_.

Approximate each number to the nearest tenth.

6.  $\sqrt{90}$

7.  $\sqrt{71}$

8.  $\sqrt{72}$

Write each decimal as a fraction.

9.  $0.\overline{8}$

10.  $0.\overline{89}$

11.  $0.\overline{86}$

Choose the best answer.

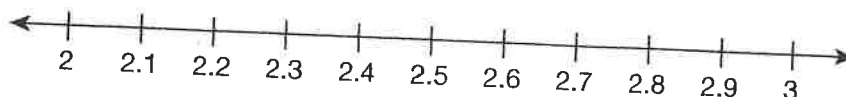
12. Which number is rational?

- A.  $-\sqrt{9}$
- B. 0.010010001...
- C.  $\sqrt{65}$
- D.  $\sqrt{-100}$

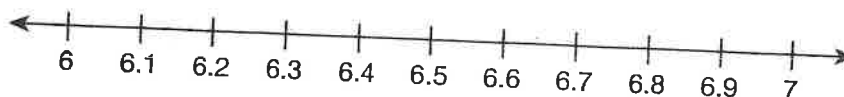
13. Which is the best approximation for  $\sqrt{44}$ ?

- A. 6.6
- B. 6.63
- C. 6.64
- D. 7

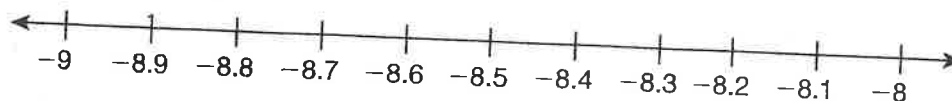
14. Plot  $\sqrt{6}$  on the following number line.



15. Plot  $\sqrt{47}$  on the following number line.



16. Plot  $-\sqrt{77}$  on the following number line.



Write three equivalent decimals for each number.

17. -132

\_\_\_\_\_

18. 93.3

\_\_\_\_\_

19. 0.09

\_\_\_\_\_

20. -4.2323

\_\_\_\_\_

Write each decimal as a fraction.

21.  $0.\overline{3}$

\_\_\_\_\_

22.  $2.\overline{2}$

\_\_\_\_\_

23.  $0.\overline{18}$

\_\_\_\_\_

24.  $3.\overline{63}$

\_\_\_\_\_

25.  $2.\overline{90}$

\_\_\_\_\_

26.  $9.\overline{7}$

\_\_\_\_\_

Determine the two closest integers for each irrational number.

27.  $\sqrt{88}$

\_\_\_\_\_

28.  $\sqrt{5}$

\_\_\_\_\_

29.  $\sqrt{27}$

\_\_\_\_\_

Complete each sentence. Write decimals to the hundredths place.

30.  $\sqrt{33}$  is between 5.74 and \_\_\_\_\_, and it is closer to \_\_\_\_\_.

31.  $\sqrt{11}$  is between \_\_\_\_\_ and \_\_\_\_\_, and it is closer to \_\_\_\_\_.

32.  $\sqrt{105}$  is between \_\_\_\_\_ and \_\_\_\_\_, and it is closer to \_\_\_\_\_.

Use the situation and table to answer questions 33 and 34.

Carissa calculated the lengths of 4 hiking trails. Because some trails form a triangle or a circle, some lengths have square roots or the  $\pi$  symbol.

Lengths of Hiking Trails

Trail	Length (in km)
Valley View	$2.5\sqrt{4}$
Butterfly Gulch	$2\pi$
Waterfall Perch	4.275
Forest Walk	$2\sqrt{5}$

33. **IDENTIFY** Identify the trails that have irrational lengths. Explain your reasoning.

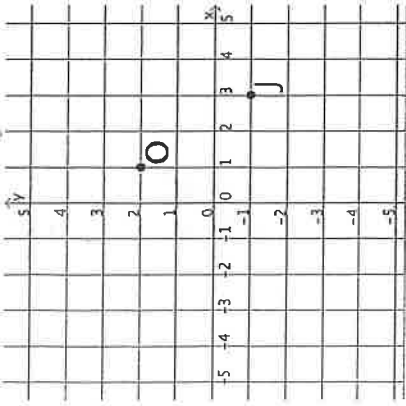
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

34. **LIST** List the lengths from shortest to longest. Explain your work.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

List the ordered pair for each point:

J( , ) O( , )



Complete the table:

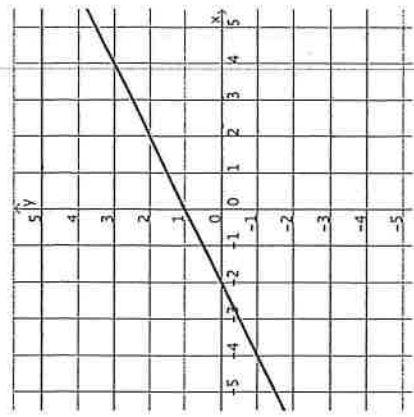
$u$	$3u$
6	18
7	21
8	
9	27

Complete the table:

$n$	$4n + 7$
-1	3
-2	
-3	-5
-4	-9

Complete the table:

$b$	
-3	-6
0	-3
3	0
6	3



Calculate the slope \_\_\_\_\_

What is the y-intercept? \_\_\_\_\_

If  $y > 9$ , two possible values for  $y$  are \_\_\_\_\_ and \_\_\_\_\_.

Evaluate:  
 $9 \cdot 4 - 6$

Simplify:  
 $7a + (2a + a)$

Solve for  $n$ :  
 $8 = n + 3$

$n =$  \_\_\_\_\_

Evaluate  $4b + 2$  when

$b = 1$  \_\_\_\_\_

$b = 3$  \_\_\_\_\_

Write a word phrase for this expression:  
 $n + 9$

Write an expression for this phrase:  
*The difference of a number and 6*

Evaluate:  
 $(-2) \cdot (-4)$

Graph the inequality  $m > -4$



Evaluate:  
 $4 + (9 \div 3) - 2^2$

Evaluate:  
 $(-2)^3$

Write an expression for this phrase:  
*The product of 9 and a number*

Evaluate  $2x + 4y$  when  
 $x = 2$  and  $y = -3$

Write a word phrase for this expression:  
 $7 - b$

Evaluate  $8g - 4$  when  
 $g = 2$  \_\_\_\_\_  
 $g = -2$  \_\_\_\_\_

Simplify:  
 $6 - 2(c - 4)$