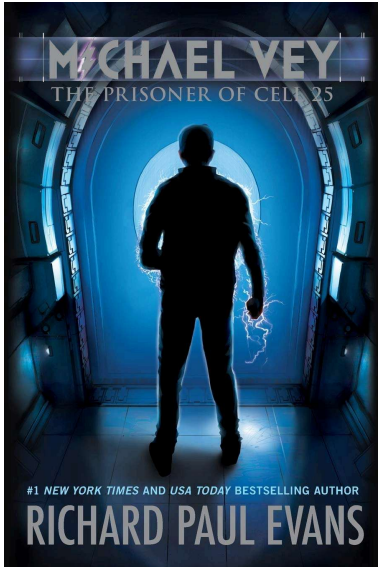


## 7th Grade Summer Project

You will read ONE book and complete the rising 7th grade math packet.

### 7th Grade Humanities

**Read:** *The Prisoner of Cell 25: Michael Vey* by Richard Paul Evans and complete the assignment.



My name is Michael Vey, and the story I'm about to tell you is strange. Very strange. It's my story.

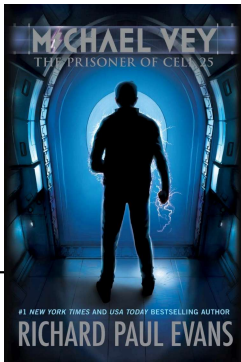
To everyone at Meridian High School, fourteen-year-old Michael Vey is nothing special, just the kid who has Tourette's syndrome. But in truth, Michael is extremely special—he has electric powers. Michael thinks he is unique until he discovers that a cheerleader named Taylor has the same mysterious powers. With the help of Michael's friend, Ostin, the three of them set out to discover how Michael and Taylor ended up with their abilities, and their investigation soon brings them to the attention of a powerful group who wants to control the electric teens—and through them, the world.

#1 New York Times bestselling author Richard Paul Evans introduces a character whose risk-filled exploration marks the beginning of a riveting new series. With only his powers, his wits, and his friends to protect him, Michael will need all his strength to survive....

**Assignment for *The Prisoner of Cell 25*:** Complete at least 3 activities from the attached Choice Board. Bring the completed assignments to class on Thursday, August 7.

### 7th Grade Math

Complete the math packet. It is suggested that you complete one page per week. Bring the completed packet with you to school on Wednesday, August 12.



## Michael Vey Choice Board

<p>Create an acrostic poem using the word, "Friendship".</p>	<p>Construct an <b>illustrated</b> timeline of at least 8 major events in <i>Michael Vey</i>. Include a caption or short description with each drawing.</p>	<p>Create a figurative language booklet in which you collect at least 5 examples of figurative language. You must identify the type of figurative language and explain its meaning.</p>
<p>Choose three character traits to describe Michael. Consider his thoughts, feelings, actions, and words. Provide text evidence to support your choices.</p>	<p>Create a Quote Quilt by folding your paper into 4 sections. Write 1 important quote in each part. On the back, explain why each quote is so important.</p>	<p>If you had a special power, what would the power be? How would you use it? Would you be tempted to use it for the wrong reasons? Explain.</p>
<p>Research Tourette Syndrome. Create a Google Slides presentation with at least 5 facts and images.  <a href="http://kidshealth.org/en/kids/k-tourette.html">http://kidshealth.org/en/kids/k-tourette.html</a></p>	<p>Design a <u>new</u> book jacket for <i>Michael Vey</i>. Your cover must look different from the original. Don't forget to include a short summary about the book on the back of the book jacket.</p>	<p>Compare and contrast Michael and Ostin by using a venn diagram. Explain their similarities and differences in two well-written paragraphs.</p>

## Review

## Vocabulary

Choose the correct word from the vocabulary box to match the description or example.

## Vocabulary

positive number  
negative number  
opposites  
integers  
inequality

1. a number sentence such as  $3 < 4$  or  $-5 > -10$

\_\_\_\_\_

2. Examples are  $-2$ ,  $3$ , and  $0$ .

\_\_\_\_\_

3. a number that is less than zero

\_\_\_\_\_

4. a way to describe the relationship between the integers  $-2$  and  $2$

\_\_\_\_\_

5. a number that is to the right of zero on a horizontal number line

\_\_\_\_\_

## Concepts and Skills

6. Which numbers are greater than  $-2$ ? Select all that apply.

(A)  $-5$

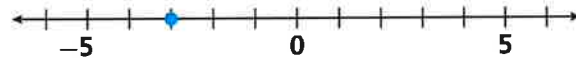
(D)  $-2$

(B)  $3$

(E)  $-1$

(C)  $0$

7. What integer is graphed on the number line?



\_\_\_\_\_

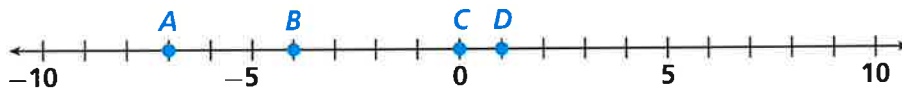
8. **(MP) Use Tools** At 3 a.m., the temperature is  $-6^{\circ}\text{F}$ . At 5 a.m., the temperature is  $-2^{\circ}\text{F}$ . Is the temperature at 3 a.m. colder than the temperature at 5 a.m.? State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

\_\_\_\_\_

\_\_\_\_\_

9. Positive and negative numbers are used to indicate elevations. Which statement is true about the elevations 30 feet and  $-30$  feet?
- (A) They are both 30 feet above sea level.
  - (B) The elevations are each the same distance from sea level.
  - (C) They are both 30 feet below sea level.
  - (D) The elevation of 30 feet is farther from sea level than the elevation of  $-30$  feet.

10. Use the number line to find the opposite of the integer for each point, and then record each opposite in the table.



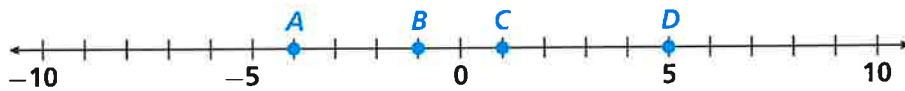
Integer	Opposite
A	
B	
C	
D	

11. Terri's bank statement lists two transactions, one for  $-\$48$  and one for  $-\$51$ . Complete each statement to compare these values. Use "lesser" or "greater".

The integer  $-48$  is \_\_\_\_\_ than the integer  $-51$ ,

but  $-\$48$  represents a \_\_\_\_\_ amount spent than  $-\$51$ .

12. Use the number line to find the absolute value of the integer for each point.



$|A| =$  \_\_\_\_\_

$|B| =$  \_\_\_\_\_

$|C| =$  \_\_\_\_\_

$|D| =$  \_\_\_\_\_

## Review

## Vocabulary

Choose the correct term from the Vocabulary box.

- the least number, other than zero, that is a multiple of two or more given numbers  
\_\_\_\_\_
- A \_\_\_\_\_ can be written in the form  $\frac{a}{b}$ , where  $a$  and  $b$  are integers and  $b \neq 0$ .
- To compare and order fractions, the fractions can be written with a \_\_\_\_\_.
- The \_\_\_\_\_ is the greatest number by which two or more given numbers can be evenly divided.

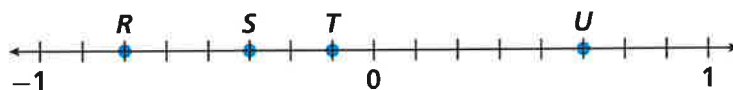
## Vocabulary

rational number  
common denominator  
least common multiple  
greatest common factor

## Concepts and Skills

- A thermometer in Grand Forks, North Dakota, reads  $-4.5^\circ\text{F}$  in January. The temperature on the same day in February has the same absolute value as the temperature in January but is not the same temperature. What is the temperature in February? \_\_\_\_\_  $^\circ\text{F}$
- (MP) Use Tools** What is the least common denominator for the fractions  $\frac{3}{4}$ ,  $-\frac{2}{5}$ , and  $\frac{3}{2}$ ? State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.  
\_\_\_\_\_  
\_\_\_\_\_

- Use the number line to match the statements to the point on the number line.



- |           |   |   |                                       |
|-----------|---|---|---------------------------------------|
| Point $R$ | • | • | The absolute value is $\frac{1}{8}$ . |
| Point $S$ | • | • | The absolute value is $\frac{3}{4}$ . |
| Point $T$ | • | • | The absolute value is $\frac{3}{8}$ . |
| Point $U$ | • | • | The absolute value is $\frac{5}{8}$ . |

8. Which inequality is correct?

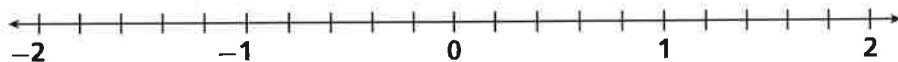
(A)  $-0.25 > \frac{1}{3}$

(B)  $\frac{4}{5} > 0.7$

(C)  $1.2 < 1\frac{1}{5}$

(D)  $-2\frac{3}{4} > -2.6$

For Problems 9–11, use the number line to complete each inequality.



9.  $-1\frac{8}{10}$    $|-1.8|$

10.  $|0.4|$    $|\frac{-4}{5}|$

11.  $-\frac{6}{5}$    $-1.3$

12. The city of Kuttanad, India, has an elevation of  $-2.14$  meters. The area near the mouth of the Dniester River in Moldova has an elevation that is the opposite of the elevation in Kuttanad. What is the elevation near the mouth of the Dniester River?

\_\_\_\_\_ meters

13. Which expression shows the sum of 54 and 36 as the product of the GCF and a sum of two numbers with no common factor?

(A)  $6(6 + 9)$

(B)  $18(2 + 3)$

(C)  $18(18 + 36)$

(D)  $108(2 + 3)$

14. Finches are small songbirds. The table lists the lengths of four finches, each of a different species. Order the finches from shortest to longest.

Finch species	Length (inches)
house finch	$5\frac{5}{8}$
indigo bunting	4.9
crimson finch	$5\frac{1}{10}$
purple finch	5.9

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## Review

## Vocabulary

Complete the following to review your vocabulary for this module.

- For the expression  $6^4$ :
  - The \_\_\_\_\_ is 6 and the \_\_\_\_\_ is 4.
  - A(n) \_\_\_\_\_ using repeated multiplication is  $6 \times 6 \times 6 \times 6$ .
- A(n) \_\_\_\_\_ expression contains at least one variable, while a(n) \_\_\_\_\_ expression contains only numbers and operations.
- For the expression  $4x + 7$ , the \_\_\_\_\_ is 4, the \_\_\_\_\_ is  $x$ , and the \_\_\_\_\_ is 7.
- To \_\_\_\_\_ an algebraic or numerical expression, find its value.
- \_\_\_\_\_ are terms with the same variables raised to the same exponents.

## Vocabulary

algebraic expression  
base  
coefficient  
constant  
equivalent expression  
evaluate  
exponent  
like term  
numerical expression  
term  
variable

## Concepts and Skills

For Problems 6–9, write an equivalent expression and evaluate.

- $5 \times 5 \times 5 \times 5 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$
- $\underline{\hspace{2cm}} = 4^3 = \underline{\hspace{2cm}}$
- $\underline{\hspace{2cm}} = 2^5 = \underline{\hspace{2cm}}$
- $3 \times 3 \times 3 \times 3 \times 3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$
- MP Use Tools** Howard buys 5 pounds of apples at \$2.50 per pound and 3 pounds of grapes at \$1.50 per pound. What is the total cost of the fruit. State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.  
  
\_\_\_\_\_

For Problems 11–12, identify the variable, coefficient, and constant term of the expression.

- $12p + 47$   
variable: \_\_\_\_\_  
coefficient: \_\_\_\_\_  
constant: \_\_\_\_\_
- $m + 7.5$   
variable: \_\_\_\_\_  
coefficient: \_\_\_\_\_  
constant: \_\_\_\_\_

13. Write an equivalent expression using the Distributive Property.

$$35 + 21 = 7(\square + \square)$$

14. Write an algebraic expression for 24 more than the product of 2 and  $x$ .

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15. Barbara has  $b$  bags that each contain 4 pounds of rice. She has another bag that has 3 pounds of rice. Write an algebraic expression that shows how many pounds of rice Barbara has.

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16. Evaluate the expression  $5(m - 2) + 10w$  when  $m = 8.4$  and  $w = 1.25$ .

- (A) 8.75
- (B) 44.5
- (C) 80.25
- (D) 52.5

17. Evaluate the expression  $6x + \frac{2}{3} - 4y + \frac{1}{2}$  when  $x = \frac{3}{4}$  and  $y = \frac{1}{6}$ .

- (A)  $2\frac{2}{3}$
- (B) 5
- (C)  $1\frac{1}{2}$
- (D) 4

18. Which expressions are equivalent to  $8(2s + 6)$ ? Select all that apply.

- (A)  $16s + 6$
- (B)  $16s + 48$
- (C)  $10s + 48$
- (D)  $4(4s + 12)$
- (E)  $2(4s + 1) + 4(2s + 1)$

19. Write three expressions that are equivalent to  $24k + 12k$ .

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20. A bag of plums costs \$3 per pound and a bag of oranges costs \$2 per pound. If Cammie buys  $x$  pounds of plums and  $y$  pounds of oranges, what expression could she write to find the total amount she will spend?

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## Review

## Vocabulary

Choose the correct term from the Vocabulary box.

1. a mathematical sentence that shows the relationship between quantities that are not equal \_\_\_\_\_
2. a mathematical sentence that shows that two expressions are equivalent \_\_\_\_\_
3. 3 is the \_\_\_\_\_ of the equation  $b + 2 = 5$
4. 8 is a \_\_\_\_\_  $x < 10$

## Vocabulary

equation  
 solution  
 inequality  
 solution of the inequality

## Concepts and Skills

5. **MP Use Tools** A Komodo dragon can grow to be 120 inches long. One Komodo dragon is 92 inches long. Write and solve an equation to find the number of inches  $x$  the Komodo dragon still needs to grow to be 120 inches long. State what strategy and tool you will use to answer the question, explain your choice, and then find the answer.

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6. Dakota has been assigned 80 math problems that are due in 5 days.
  - A. Write an equation to determine how many problems she should do each day if she wants to do the same number each day. Choose any letter for the variable and explain what it represents.

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- B. Solve the equation. How many problems should Dakota do each day?

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7. Karen used one-third of her total stamps on a campaign for charity. Karen used 60 stamps on the charity campaign.

A. Write an equation you could use to find how many stamps she had at the start. Choose any letter for the variable and explain what it represents.

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B. Solve the equation. How many stamps did Karen start with?

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8. Denise used 22.5 gallons of water in the shower. This amount is 7.5 gallons less than the amount she used for washing clothes. Write and solve an equation to find the amount of water  $x$  Denise used to wash clothes.

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9. In a visit to Glacier National Park in Montana, Vera hiked a total of 138 miles in 12 days. She hiked the same distance each day. Write and solve an equation to find the number of miles  $m$  she hiked each day.

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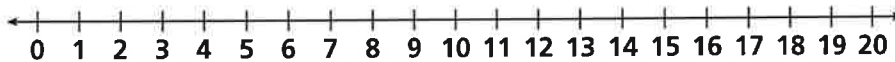
10. The temperature dropped 20 degrees from noon to midnight. The temperature at midnight was  $24^{\circ}\text{F}$ . Write and solve an equation to find the temperature at noon.

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For Problems 11–13, write and graph an inequality for each situation.

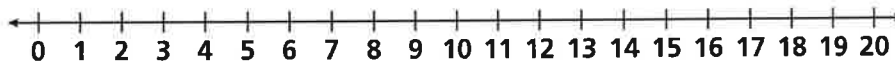
11. The width  $w$  is less than 10 inches.

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12. The truck has a weight  $t$  of more than 2 tons.

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13. The temperature  $t$  was below  $20^{\circ}\text{C}$ .

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