

Teacher's Resource Masters

GRADE 7 VOLUME 1

Topics 1-4

Home-School Connection Letters

Pick a Project

enVision® STEM Project

Reteach to Build Understanding

Additional Vocabulary Support

Build Mathematical Literacy

Enrichment

enVision® Mathematics

Grade 7

Volume 1: Topics 1–4

Topic 1 Rational Number Operations

Topic 1 Home-School Connection (English and Spanish)

Topic 1 Pick a Project A–D

Topic 1 **enVision**® STEM Project

Reteach to Build Understanding 1-1 through 1-10

Additional Vocabulary Support 1-1 through 1-10

Build Mathematical Literacy 1-1 through 1-10

Enrichment..... 1-1 through 1-10

Topic 2 Analyze and Use Proportional Relationships

Topic 2 Home-School Connection (English and Spanish)

Topic 2 Pick a Project A–D

Topic 2 **enVision**® STEM Project

Reteach to Build Understanding 2-1 through 2-6

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Topic 3 Analyze and Solve Percent Problems

Topic 3 Home-School Connection (English and Spanish)

Topic 3 Pick a Project A–D

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Topic 4 Generate Equivalent Expressions

Topic 4 Home-School Connection (English and Spanish)

Topic 4 Pick a Project A–D

Topic 4 **enVision**® STEM Project

Reteach to Build Understanding 4-1 through 4-8

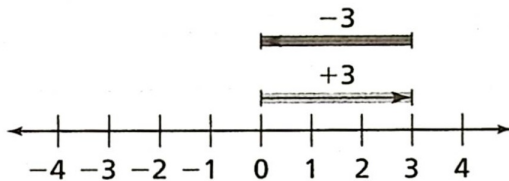
Additional Vocabulary Support 4-1 through 4-8

Build Mathematical Literacy 4-1 through 4-8

Enrichment..... 4-1 through 4-8

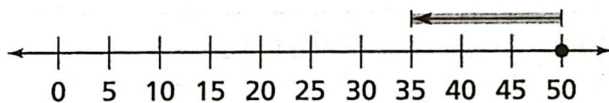
Two numbers that are the same distance from 0 on a number line, but in opposite directions, are called opposites. The whole numbers and their opposites make up the set of integers.

Opposites combine to make 0. For example, 3 and -3 are opposites.



Jacob has saved \$50. He spends \$15 at the movies. Then, after paying for repairs to his bike, he has \$0 remaining. How much did the bike repairs cost?

1. What integer represents Jacob's savings?
2. What integer represents the change in Jacob's savings after he spends money at the movies?
3. The number line represents the change in Jacob's savings after the movies. Use the number line to show Jacob's change in savings after the bike repairs.

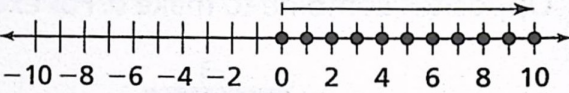


4. What integer represents the change in Jacob's savings due to the bike repairs? What integer represents the cost of the bike repairs?

On the Back!

5. On a winter's morning, the temperature was 0°F . The temperature increased during the daytime. At night, the temperature decreased 6°F and returned to 0°F . What integer represents the temperature change during the daytime? Represent the situation using a number line.

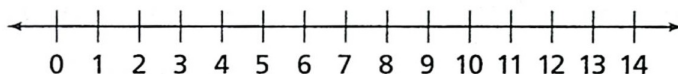
Complete the vocabulary chart.

Word or Phrase	Definition	Picture or Example
whole numbers	the counting numbers, plus zero	0, 1, 2, 3, 4, ... 
positive numbers		4, $1\frac{1}{2}$, 15
negative numbers	all numbers less than zero; numbers to the left of zero on a number line	
	the set of positive whole numbers, their opposites, and zero	
	the distance from zero on the number line	$ -3 = 3$ $ 5 = 5$
opposite integers		

Name _____

Read the problem below. Answer the questions to help you understand how to use the number line to solve the problem.

An apartment building has a parking lot with 12 parking spaces for tenants. At 6 A.M., all 12 spaces were full. At 8 A.M., the number of cars in the lot had decreased by 4. By 9 A.M., there were no cars left in the lot. Use the number line to show each change in the number of cars in the parking lot. What integer represents the change in the number of cars between 8 A.M. and 9 A.M.?



1. Underline the information related to the quantities of cars.
2. What integer is represented by the phrase "decreased by 4"?
3. To represent this situation on the number line, where would you start? Explain.
4. Once all of the changes in the number of cars are shown on the number line, where will the last arrow end? Explain.
5. Why are there no negative numbers on the number line?
6. Will you use a positive or a negative integer to represent the change in the number of cars between 8 A.M. and 9 A.M.? Explain.