lesson sixteen - student resource sheet

Lesson Objective: Add several integers.

Vocabulary Box

additive inverse — For any number *x,* the number that gives zero when added to *x*. Example: The additive inverse of 4 is –4.

additive identity — The number zero, because the sum of zero and any number is that number. Example: 6 + 0 = 6.

Guided Practice

Directions: Complete the following practice problems. Your teacher will review the answers. Make sure you show all your work.

I. Solve each addition problem using two-color counters and the integer mat.

1. 6 + –5 + 4 = _____
2. –2 + –3 + –1 = _____
3. 4 + –7 + 1 + –6 = _____

Integer Mat

Negative	Positive

II. Solve each addition problem. First, solve using integer rules. Then, check each answer by adding integers from left to right. Please work on your own.

1. 5 + –8 + –3 = _____

2. 2 + –2 + 2 + –2 = _____

3. –12 + 5 + –8 + –2 + 20 = _____

4. 8 + 2 + –17 = _____

Summary/Closure

A. Vocabulary Words
For the vocabulary terms listed, write a sentence using the terms and give an example.

additive inverse –

additive identity –

B. Summarize What We Learned Today
Write a sample problem of adding four integers. Make two of the integers positive, and make the other two integers negative. Then solve it.

Explain in words how you solved the problem and how to check the answer.

lesson seventeen - student resource sheet

Lesson Objective: Add several integers.

Vocabulary Box

additive inverse — For any number *x,* the number that gives zero when added to *x*. Example: The additive inverse of 4 is –4.

additive identity — The number zero, because the sum of zero and any number is that number. Example: 6 + 0 = 6.

Independent Practice

Directions: Complete the following practice problems on your own. Your teacher will review the answers. Make sure you show all your work.

I. Tell whether the result is positive, negative, or neither.

1. 6 + –4 + 3 + –7 _____

2. 0 + 4 + 0 + –4 _____

3. –8 + 5 + 10 + –1 _____

II. Solve each problem using integer rules. Then check each answer by adding from left to right.

1. –9 + 17 + –25 + 2 + 1 = _____

2. 3 + –16 + 4 + 12 + –4 = _____

3. 13 + –4 + –10 + 7 = _____

4. –87 + 97 + –254 = _____

5. –785 + –231 + 347 = _____

6. –8 + –104 + 420 + –78 + –123 = _____

Find the missing integer to make the problem correct.

–15 + –9 + _____+ –100 + 32 + –781 + 823 + –41 + 30 = –45

Find the sum.

–1,254 + –74,685 + 154,718 + –3,241 + 645 = _____

Problem Solving

An elevator operates in the building pictured below. The ground floor is considered floor 0. The positive-numbered floors continue up above ground, and there are 3 floors below ground.

	7
	6
	5
	4
	3
	2
	1
Ground Floor	0
	–1
	–2
	–3

1. On which floor will the elevator stop if it starts on the ground floor, goes up 4 floors, down 3, and up 2? Write out the addition problem and solve it. Then write your answer in a complete sentence.

2. On which floor will the elevator stop if it starts on the 2nd floor, goes up 5 floors, goes down 9 floors, and goes up 2 floors? Write out the addition problem and solve it. Then write your answer in a complete sentence.

3. How many floors will the elevator rise if it starts at level –3 and rises all the way to the 7th floor? HINT: You will be adding all positive integers. Write out the addition problem and solve it. Then write your answer in a complete sentence.

4. Write your own question about the elevator. The question must involve adding more than two integers with different signs. Include a solution.

1. What is the additive inverse of –145?

2. –14 + 15 + 7 + –21 = _____

3. 12 + –12 + 25 = _____

lesson eighteen - student resource sheet

Lesson Objective: Subtract several integers.

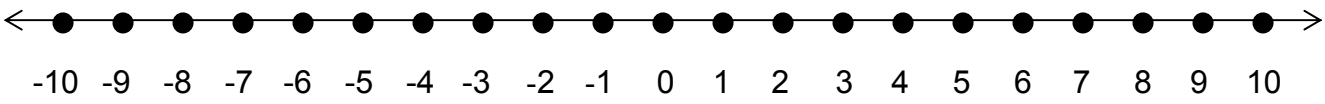
Vocabulary Box

associative property of addition — The sum of more than two numbers does not depend on how the numbers are grouped; (a + b) + c = a + (b + c).
Example: 2 + (5 + 4) = (2 + 5) + 4.

commutative property of addition — Two or more numbers may be added in any order; a + b = b + a. Example: 4 + 5 = 5 + 4.

Guided Practice

Directions: Complete the following practice problems with your partner. Your teacher will review the answers. Make sure you show all your work.



I. Rewrite each problem below as an addition problem. Then use the number line to solve each problem.

1. 5 – (–2) – 8 = _____

2. –5 – 9 – (–5) – (–3) – (–9) = _____

3. 12 – 8 – 12 – (–4) = _____

II. Solve each subtraction problem working from left to right, two integers at a time. Then check each answer by rearranging the problem and solving it.

1. 23 – (–17) – 10 – 7 – (–5) = _____

2. –5 – (–7) – (–10) – 2 – 3 – (–5) = _____

3. 10 – 13 – 14 – (–6) – (–2) = _____

III. Solve each subtraction problem working from left to right, two integers at a time. Then check each answer by rearranging the problem and solving it. Please work on your own.

1. 67 – (–54) – 67 – (–123) – 2 = _____

2. 578 – 45 – 321 – (–69) = _____

3. – 14 – (–28) – 11 – (–3) – 10 – (–5) = _____

Summary/Closure

A. Vocabulary Words
For the vocabulary terms listed, write a definition in your own words and give an example.

associative property of addition —

commutative property of addition —

B. Summarize What We Learned Today
Solve the problem below, and explain your reasoning step-by-step.

$$6 - (-3) - 6 - (-12) - (-2) - 3 = \_\_\_\_\_$$