

Objective

Adding Integers, Part I

Warm-Up



A large hotel has a ground floor (street level) and 26 floors of guest rooms above street level, which can be modeled by positive integers. There are 5 floors of parking below street level, which can be modeled by negative integers.

In this hotel, street level is represented by zero.

Write an integer addition problem that models the hotel elevator's motion in each case.

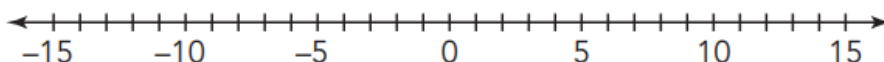
1. The elevator starts at street level, goes down 4 floors, and then goes up 11 floors.
2. The elevator starts at street level, goes down 2 floors, goes up 5 floors, and finally goes down 3 floors.



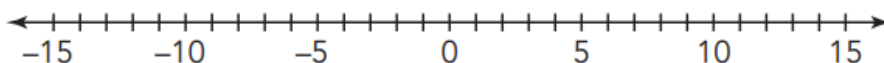
Now that you have the feel for how to move on the number line when adding negative numbers, it is time to practice with more examples.

Use the number line to determine each sum. Show your work.

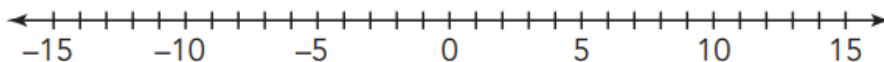
1. $-9 + 5 =$ _____



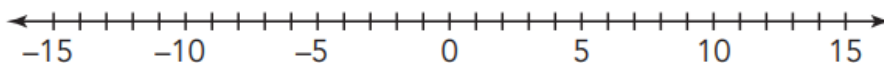
2. $9 + (-5) =$ _____



3. $-9 + (-5) =$ _____



4. $9 + 5 =$ _____



Notice that the first term in each expression in Questions 1 through 4 was either 9 or (-9) .

5. What do you notice about the distances shown by these terms on the number lines?

6. What is the absolute value of each term?

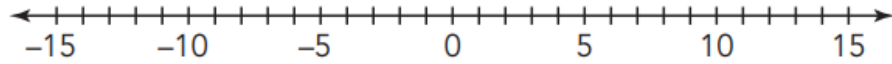
Notice that the second term in each expression was either 5 or (-5) .

7. What do you notice about the distances shown by these terms on the number lines?

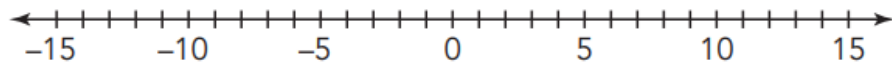
8. What is the absolute value of each term?

Use the number line to determine each sum. Show your work.

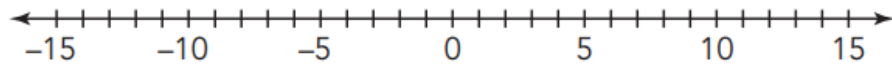
9. $-8 + 2 =$ _____



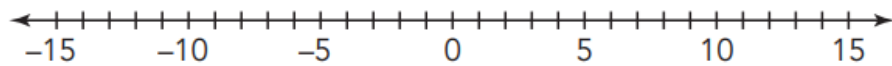
10. $8 + (-2) =$ _____



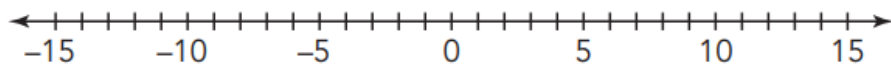
11. $-8 + (-2) =$ _____



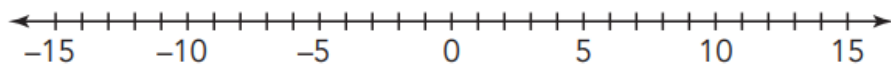
12. $8 + 2 =$ _____



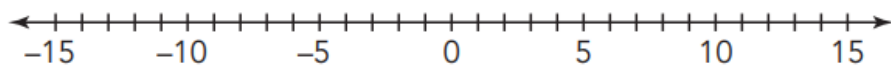
13. $-4 + 11 =$ _____



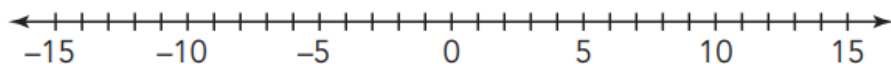
14. $4 + (-11) =$ _____



15. $-4 + (-11) =$ _____



16. $4 + 11 =$ _____



Show You Know

Patterns on the Line

Demonstrate what you have learned about adding two numbers using a number line.

1. Describe the patterns from the Adding on Number Lines activity, when you:

a. add two positive numbers.

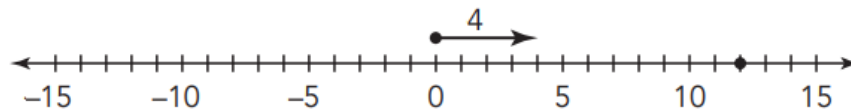
b. add two negative numbers.

c. add a negative and a positive number.

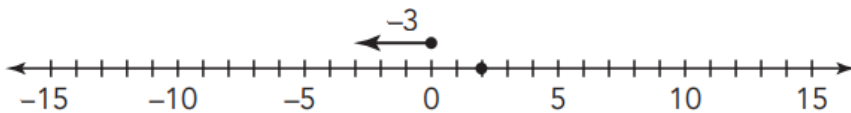
2. Do you think these patterns will hold true for all numbers, even fractions and decimals? Explain your reasoning.

3. Complete each number line model and number sentence.

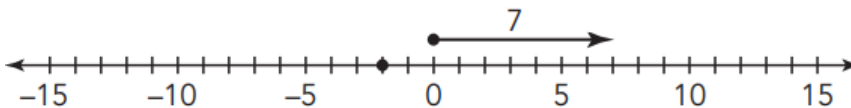
a. $4 + \underline{\hspace{2cm}} = 12$



b. $-3 + \underline{\hspace{2cm}} = 2$



c. $7 + \underline{\hspace{2cm}} = -2$





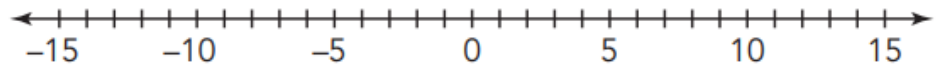
LESSON 5.2b
Walk the Line



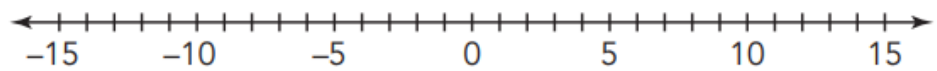
Objective Adding Integers, Part I

Complete each number line model and number sentence.

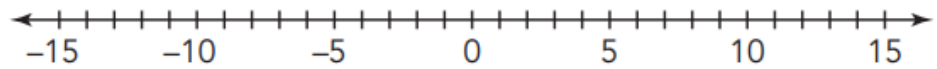
1. $-4 + \underline{\hspace{2cm}} = 0$



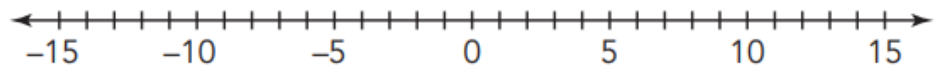
2. $-15 + \underline{\hspace{2cm}} = -9$



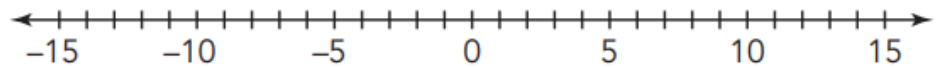
3. $\underline{\hspace{2cm}} + 10 = -2$



4. $\underline{\hspace{2cm}} + (-11) = -4$



5. $-12 + \underline{\hspace{2cm}} = -14$



Draw a number line model to determine each sum.

1. $-1.6 + -0.7$

2. $-2.1 + 0.8$

3. $2.2 + -4.1$

