

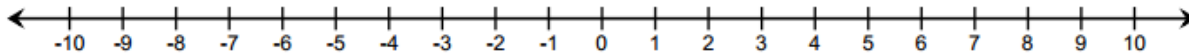
**Lesson Summary**

- On a number line, arrows are used to represent integers; they show length and direction.
- The length of an arrow on the number line is the absolute value of the integer.
- Adding several arrows is the same as combining integers in the Integer Game.
- The sum of several arrows is the final position of the last arrow.

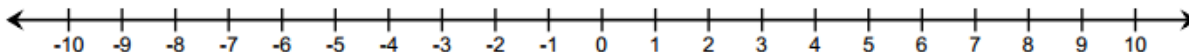
**Problem Set**

Represent Problems 1–3 using both a number line diagram and an equation.

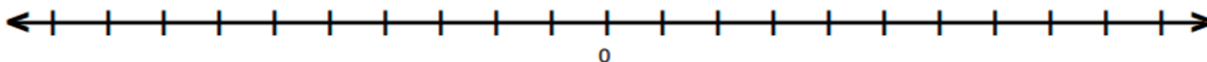
1. David and Victoria are playing the Integer Card Game. David drew three cards,  $-6$ ,  $12$ , and  $-4$ . What is the sum of the cards in his hand? Model your answer on the number line below.



2. In the Integer Card Game, you drew the cards,  $2$ ,  $8$ , and  $-11$ . Your partner gave you a  $7$  from his hand.
- a. What is your total? Model your answer on the number line below.



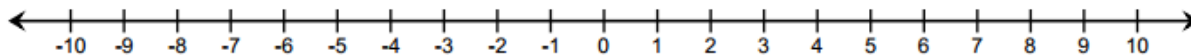
- b. What card(s) would you need to get your score back to zero? Explain. Use and explain the term *additive inverse* in your answer.
3. If a football player gains  $40$  yards on a play, but on the next play, he loses  $10$  yards, what would his total yards be for the game if he ran for another  $60$  yards? What did you count by to label the units on your number line?



4. Find the sums.

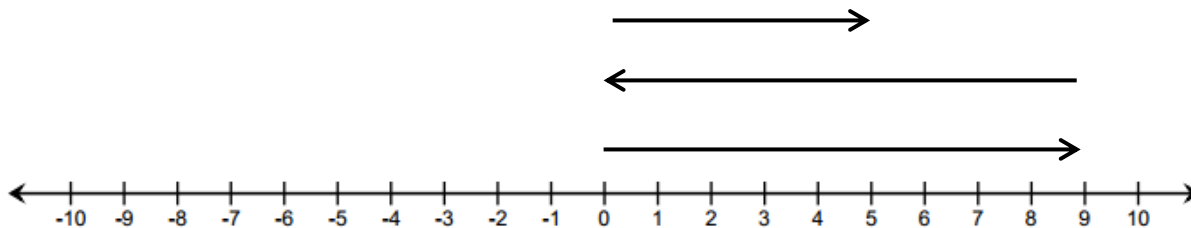
- $-2 + 9$
- $-8 + -8$
- $-4 + (-6) + 10$
- $5 + 7 + (-11)$

5. Mark an integer between 1 and 5 on a number line, and label it point  $Z$ . Then, locate and label each of the following points by finding the sums.



- Point  $A$ :  $Z + 5$
- Point  $B$ :  $Z + (-3)$
- Point  $C$ :  $(-4) + (-2) + Z$
- Point  $D$ :  $-3 + Z + 1$

6. Write a story problem that would model the sum of the arrows in the number diagram below.



7. Do the arrows correctly represent the equation  $4 + (-7) + 5 = 2$ ? If not, draw a correct model below.

