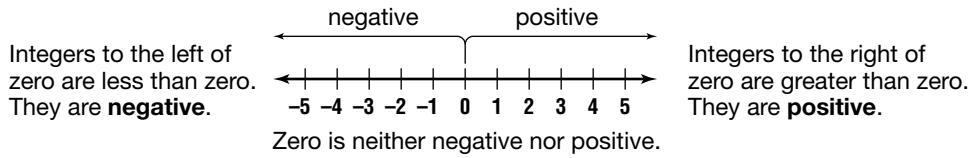


2-1 Integers and Absolute Value (Pages 66–70)

An **integer** is a number that is a whole number of units from zero on the number line.



The number that corresponds to a point on the number line is the **coordinate** of the point. The **absolute value** of a number is the distance the number is from zero. Two vertical bars are used to indicate the absolute value of a number. For example, $|4| = 4$ and $|-4| = 4$.

EXAMPLES

A Graph $\{0, -2, 4\}$ on the number line.

Find the point for each number on the number line and draw a dot.

B Simplify $|-2| + |4|$.

$|-2| + |4| = 2 + 4 = 6$ *The absolute value of -2 is 2 and the absolute value of 4 is 4.*

Try These Together

Graph each set of numbers on a number line.

1. $\{1, -1, -3\}$ 2. $\{5, 7, -3, -2\}$ 3. $\{4, 2, -2, -4\}$ 4. $\{2, 3, -4, -3\}$

HINT: Locate each point on the number line and draw a dot.

PRACTICE

Write an integer for each situation.


5. a loss of \$7 6. a distance of 50 meters 7. 35 minutes left in class

Simplify.

8. $|-12|$ 9. $|8|$ 10. $|-15| - 8$ 11. $|12| + |-2|$
 12. $|0| + |-3|$ 13. $|-5| - |-2|$ 14. $|9| + |-3|$ 15. $-|-1|$
 16. $|-4| + |3|$ 17. $|-6| + |7|$ 18. $|8| - |3|$ 19. $|14 - 8|$

Evaluate each expression if $a = 4$, $b = 3$ and $c = -2$.

20. $|c| + b$ 21. $|a| + |b| - 3$ 22. $|b| - |c|$ 23. $|a| \cdot |c|$

 **24. Standardized Test Practice** An elevator went down 10 floors. What integer describes the trip the elevator made?

- A** 20 **B** 10 **C** -10 **D** -20

Answers: 1–4. See Answer Key. 5. -7 6. 50 7. 35 8. 12 9. 8 10. 7 11. 14 12. 3 13. 3 14. 12 15. -1 16. 7