

Name _____ Date _____

Integers and Absolute Value (Pages 56–58)

The set of **integers** consists of positive whole numbers, negative whole numbers, and zero: $\{\dots, -3, -2, -1, 0, +1, +2, +3, \dots\}$. You can write positive integers with or without the $+$ sign.

Graphing Integers on a Number Line

To **graph** an integer, locate the number and draw a dot at that point on a number line.
If a letter is used to name a point, the integer that corresponds to that letter is called the **coordinate** of the point.
The distance from a number to 0 (without regard to direction) is called the **absolute value** of the number.

EXAMPLES

A Find the absolute value of -5 .

*The absolute value of -5 is written $|-5|$.
 $|-5|$ is the distance of -5 from zero.
The point -5 is 5 units from zero.
So $|-5| = 5$.*

B Find the absolute value of 7.

*The absolute value of 7 is written $|7|$ or $|+7|$.
 $|7|$ is the distance of 7 from zero.
The point 7 is 7 units from zero.
So $|7| = 7$.*

Try These Together

1. Name the coordinate of point A graphed on the number line below.

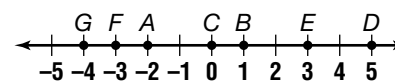
HINT: What integer corresponds to A ?

2. Find $|-10|$.

HINT: How far is -10 from 0?

PRACTICE

Name the coordinate of each point graphed on the number line.



3. G

4. C

5. B

6. E

7. F

8. D

Graph each set of points on a number line.

9. $\{3, 5, 8\}$

10. $\{-4, -1, 2\}$

11. $\{9, 4, -2, -6\}$

12. $\{-5, -2, 2, 5\}$

13. $\{-3, -7, -9\}$

14. $\{-1, 0, 5\}$

Find each absolute value.

15. $|-8|$

16. $|5|$

17. $|-22|$

18. $|20 - 10|$

19. $|-12|$

20. $|65|$

21. **Travel** Dixonville is 8 miles farther north than Huntland. Express 8 miles farther as an integer.



22. **Standardized Test Practice** Cherise and Audra both do the high jump in track and field. Audra jumps 5 inches lower than Cherise. Express 5 inches lower as an integer.

A -5

B 5

C $|5|$

D $|-5|$

Answers: 1. -2 2. 10 3. -4 4. 0 5. 1 6. 3 7. -3 8. 5 9–14. See Answer Key. 15. 8 16. 5 17. 22 18. 10 19. 12 20. 65 21. 8 22. A