

# 8-1 Study Guide and Intervention

## Integers

An integer is any number from the set  $\{\dots, -3, -2, -1, 0, 1, 2, 3, \dots\}$  where  $\dots$  means *continues without end*. You can use a number line to compare integers. On a number line, the number on the left is always less than the number on the right. **Opposite integers** are the same distance from zero on opposite sides of the number line.

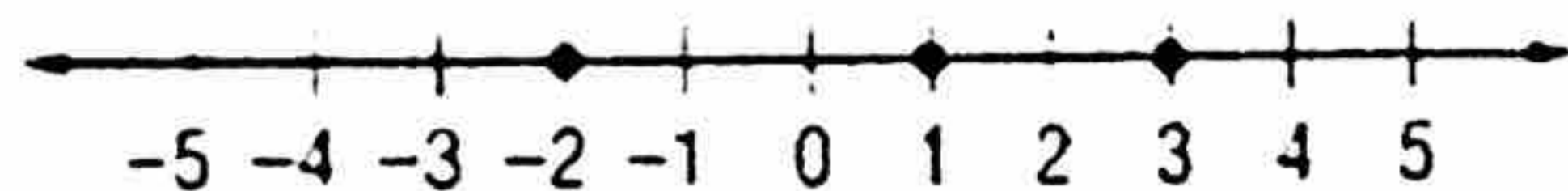
**EXAMPLE 1** Write an integer to show 3 degrees below zero.

Numbers *below zero* are negative numbers.

The integer is  $-3$ .

**EXAMPLE 2** Order the integers 1,  $-2$ , and 3 from least to greatest.

Graph each integer on a number line. Then compare.



The order from least to greatest is  $-2$ , 1, and 3.

### EXERCISES

Write an integer to describe each situation.

1. 4 degrees below zero

2. a gain of 2 points

Replace each with  $<$ ,  $>$ , or  $=$  to make a true sentence.

3.  $-2$     $0$

4.  $3$     $-3$

5.  $-9$     $-9$

Write the opposite of each integer.

6. 3

7.  $-2$

8. 1

9.  $-4$

Order each set of integers from least to greatest.

10.  $-2, 3, 0, -1, 1$

11.  $3, -3, -2, 1, -1$

12.  $5, -7, -2, 1, 9$

13.  $-2, 1, 5, -5, 0$

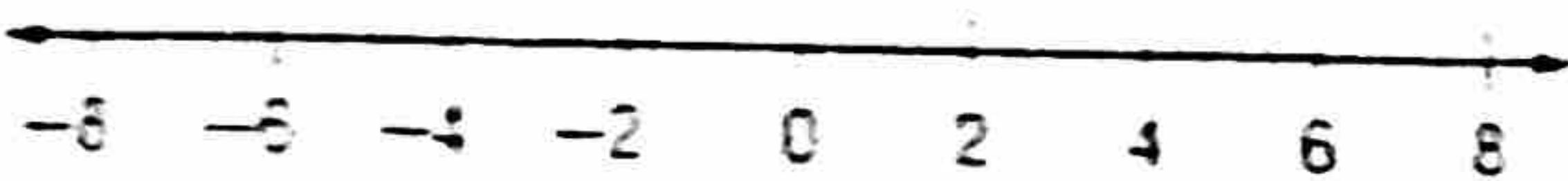
# **8-1** Practice: Skills

## *Integers*

Write an integer to describe each situation.

1. a loss of 8 yards
2. an increase of 2 inches
3. 5 feet above sea level
4. a decrease of 6 members
5. scored 10 fewer points
6. earned 7 dollars interest
7. a gain of 5 pounds
8. 4 degrees below normal

Graph each integer on the number line.



9. 0
10. -3
11. 4
12. -6
13. -5
14. 1
15. -8
16. 7

Replace each with  $<$ ,  $>$ , or  $=$  to make a true sentence.

17.  $-9$   $5$
18.  $0$   $-1$
19.  $-6$   $6$
20.  $-3$   $3$
21.  $12$   $-21$
22.  $-12$   $-10$
23.  $5$   $-5$
24.  $-83$   $-80$
25.  $-9$   $-9$
26.  $-57$   $-75$
27.  $-56$   $56$
28.  $0$   $0$

Write the opposite of each integer.

29.  $-2$
30.  $+6$
31.  $-9$
32.  $-8$
33.  $-7$
34.  $-10$
35.  $-14$
36.  $+12$

Order each set of integers from least to greatest.

37.  $2, -6, -2, 0$
38.  $9, -8, 4, -9$
39.  $5, -3, -11, 9$
40.  $-3, 2, -4, -17$