SNACKS Lynn, Chi, and Todd are reviewing their accounts at the school’s Snack Emporium. Lynn has $7 left in her account, Chi has $10 left in his account, and Todd owes the Snack Emporium $3.

1. Write an integer to represent the amount of money that each person has in his or her account at the Snack Emporium.
2. Order the integers from least to greatest.
3. Who has the least money in his or her Snack Emporium account?

In Lesson 2-9, you learned that an integer is any number from the set {..., -4, -3, -2, -1, 0, 1, 2, 3, 4…}. You can use a number line to compare and order integers.

**EXAMPLE Compare Integers**

Replace the with < or > to make a true sentence.

**12 > -4**

Graph 12 and -4 on a number line. Then compare.

Since 12 is to the right of -4, 12 > -4.

**CHECK Your Progress**

a. -3 > -5    b. -5 > 0    c. 6 > -1    d. 2 > -2

**EXAMPLE Order Integers**

Order -9, 6, -3, and 0 from least to greatest.

Graph the numbers on a number line.

The order from least to greatest is -9, -3, 0, and 6.

**CHECK Your Progress**

e. Order -4, 3, 11, and -25 from greatest to least.
f. Order -18, 30, 2, -6, and 3 from least to greatest.
ELEVATION The table shows the lowest elevation for several continents. Order the elevations from least to greatest.

First, graph each integer. Then, write the integers as they appear on the number line from left to right.

-500 -450 -400 -350 -300 -250 -200 -150 -100 -50 0

The elevations from least to greatest are -418, -156, -105, -86, -28, and -12.

GO-KARTS The table shows the results of a go-kart race. Negative values indicate seconds less than the average time, and positive values indicate seconds greater than the average time. Arrange the racers from the least amount of time to the greatest.

Example 1 (p. 572)
Replace each \( \_ \) with < or > to make a true sentence.
1. \( 17 \_ 31 \)
2. \( -6 \_ -10 \)
3. \( 9 \_ -8 \)
4. \( -83 \_ -38 \)

Example 2 (p. 572)
Order each set of integers from least to greatest.
5. \( 9, -5, -13, -8, 1 \)
6. \( 22, 4, 14, -2, 5 \)

Order each set of integers from greatest to least.
7. \( -54, 7, -8, -14, 9, -33 \)
8. \( -17, -16, 12, 24, -7 \)

Example 3 (p. 573)
RUNNING The number line shows the position of different runners in relationship to Yolanda. Which runner is ahead of Annika but behind Yolanda? Write an integer to represent her position.

Ordering Integers
When ordering integers from greatest to least, write the integers as they appear from right to left.
Replace each \( \_\_\_25CEh \) with < or > to make a true sentence.

10. \(-2 \_\_\_4\)
11. \(-2 \_\_\_4\)
12. \(1 \_\_\_3\)
13. \(-6 \_\_\_3\)
14. \(5 \_\_\_0\)
15. \(-3 \_\_\_2\)

Order each set of integers from least to greatest.

16. 15, 17, 21, 6, 3
17. 14, 1, 6, 23, 14, 5
18. -55, 143, 18, -79, 44, 101
19. -221, 63, 54, -89, -71, -10

20. Order 5, 33, 24, 17, and 6 from greatest to least.

21. **TRAINS** Gary, Sindhu, and Beth are all waiting for their trains to arrive. Gary’s train leaves at 5 minutes before noon, Sindhu’s leaves at 25 minutes after noon, and Beth’s leaves 5 minutes before Sindhu’s train. Order the three by who will leave first.

22. **CELL PHONES** The table indicates Xavier’s cell phone use over the last four months. Positive values indicate the number of minutes he went over his allotted time, and negative values indicate the number of minutes he was under. Arrange the months from least to most minutes used.

<table>
<thead>
<tr>
<th>Month</th>
<th>Time (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>February</td>
<td>-156</td>
</tr>
<tr>
<td>March</td>
<td>12</td>
</tr>
<tr>
<td>April</td>
<td>0</td>
</tr>
<tr>
<td>May</td>
<td>-45</td>
</tr>
</tbody>
</table>

**LIGHT** For Exercises 23–25, refer to the table and the following information.

The apparent magnitude of an object measures how bright the object appears to the human eye. A negative magnitude identifies a brighter object than a positive magnitude.

23. Which object appears the brightest to the human eye?
24. Order the objects from the brightest to the faintest.
25. Find the median apparent magnitude of this data set.

<table>
<thead>
<tr>
<th>Object</th>
<th>Approximate Apparent Magnitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-Watt Bulb</td>
<td>-19</td>
</tr>
<tr>
<td>Alpha Centauri</td>
<td>4</td>
</tr>
<tr>
<td>Andromeda Galaxy</td>
<td>0</td>
</tr>
<tr>
<td>Full Moon</td>
<td>-13</td>
</tr>
<tr>
<td>Sun</td>
<td>-27</td>
</tr>
<tr>
<td>Venus</td>
<td>-5</td>
</tr>
</tbody>
</table>

Source: Astronomy, A Self-Teaching Guide

**GOLF** For Exercises 26 and 27, use the bar graph and the information below.

The bar graph gives the scores of four golfers (A, B, C, and D). The numbers indicate scores above and below par.

26. Order the scores on a number line.
27. Which player had the worst score? Explain your answer.
28. OPEN ENDED Give a set of five integers, two positive and three negative, for which the mean, median, and mode are all \(-3\).

29. NUMBER SENSE Explain why \(-11\) is less than \(-7\).

30. CHALLENGE Order the fractions \(-\frac{1}{2}, \frac{5}{2}, -\frac{12}{4}, -\frac{1}{6}\), and \(\frac{7}{3}\) from least to greatest.

31. WRITING IN MATH In your own words, explain how to list integers from greatest to least.

32. The table shows the temperatures for a four-day period.

<table>
<thead>
<tr>
<th>Temperature (°F)</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(-7)</td>
<td>8</td>
<td>(-2)</td>
<td>(-1)</td>
</tr>
</tbody>
</table>

Which list shows the temperatures from least to greatest?

A 8, \(-2\), \(-1\), \(-7\)

B 8, \(-1\), \(-2\), \(-7\)

C \(-7\), \(-2\), \(-1\), 8

D \(-7\), \(-1\), \(-2\), 8

33. Verónica (V) was 12 minutes early to class, Deshawn (D) was right on time, and Kendis (K) was 3 minutes late. Which time line represents the students’ arrival to class?

F

G

H

J

34. GEOMETRY Find the surface area of the rectangular prism at the right. (Lesson 10-7)

35. ROOMS A living room is in the shape of a rectangular prism. If the dimensions of the living room are 15.5 feet by 20 feet by 8 feet, how many cubic feet of space does the room occupy? (Lesson 10-6)

Add or subtract. Write in simplest form. (Lesson 5-6)

36. \(\frac{2}{3} + \frac{3}{4}\)

37. \(\frac{5}{2} - \frac{3}{3}\)

38. \(\frac{22}{5} - \frac{3}{5}\)

39. \(\frac{3}{8} + \frac{16}{8}\)

40. 6 + 4

41. 6 − 4

42. 10 + 3

43. 10 − 3

GET READY for the Next Lesson

PREREQUISITE SKILL Add or subtract. (Page 743)