LESSON 7.12
Written Assessment

Part A

Write >, <, or =.

1. $-4 \underline{\hspace{1cm}} 3$
2. $-12 \underline{\hspace{1cm}} -10$
3. $37 \underline{\hspace{1cm}} -42$

4. $10^2 \underline{\hspace{1cm}} -200$
5. $\frac{3}{8} \underline{\hspace{1cm}} -1$
6. $9^2 \underline{\hspace{1cm}} 6^3$

7. $-3 + (-3) \underline{\hspace{1cm}} -6$
8. $7 \underline{\hspace{1cm}} -1 - (-10)$
9. $24 \div 3 \underline{\hspace{1cm}} 6 - (-7)$

10. Some of the expressions below are not number sentences. Cross them out. Then circle the number sentences that are true.

   $14 + (-25) > -50$
   $6^2 = 2^6$
   $11 \times 11 \times 11 = 33^3$

   $2 \times 10^3$
   $-21 - (-39) = 60$
   $38 < 7^2 - (-20)$

   $\frac{3}{4} + \frac{3}{4} > 1$
   $19$
   $-5 = 20 + (-25)$

11. Draw a line from each story to the number model that matches.

   a. Jada baked 4 trays of cookies with one
dozen on each tray. She and her brother
ate 6 of the cookies while they were still warm.

   b. Otis baked 4 trays of cookies. He started
with one dozen on each tray. Then his mom
removed 6 cookies from each tray to send
to Otis’s grandmother.

   Insert parentheses when necessary to make the number sentences true. (Because of the
   rules for order of operations, some of the problems might not need parentheses.)

12. $9 + 2 \times 5 = 19$
13. $12 + 8 \div 2 = 16$

14. $-8 + 43 \div 5 = 7$
15. $12 + 4 \div 8 = 12\frac{1}{2}$

16. $-3 + 5 \times 2 - (-6) = 16$
17. $4^2 + (-3) - (-5) \times 2 = 20$
Solve. You may use your $\oplus$ and $\square$ counters or your slide rule to help you.

18. $6 + (-8) = \underline{\quad}$

19. $(-9) + (-6) = \underline{\quad}$

20. $16 + (-5) = \underline{\quad}$

21. $(-7) + 13 = \underline{\quad}$

22. $(-14) - 3 = \underline{\quad}$

23. $(-8) - (-5) = \underline{\quad}$

24. $6 - \underline{\quad} = 17$

25. $17 - 20 = \underline{\quad}$

26. Kerri is playing a game. She is 8 points “in the hole.” (She has $-8$ points.)
   a. She gets 12 points on her next turn. What is her score now? $\underline{\quad}$
   b. If she loses 12 points instead, what will her score be? $\underline{\quad}$

**Part B**

Use your $\oplus$ and $\square$ counters.

27. Draw a picture that shows an account with a balance of $-6$.

28. Draw a picture that shows a balance of $8$, using exactly 10 counters.

29. What is your balance if you have the same number of $\oplus$ and $\square$ counters? $\underline{\quad}$

There are 15 $\oplus$ and 10 $\square$ counters in a container.

30. What is the balance in the container? $\underline{\quad}$

31. How many $\square$ counters do you need to add to get a negative balance? $\underline{\quad}$

32. What will be the new balance if you remove 6 $\square$ counters from the original balance? $\underline{\quad}$

33. What will be the new balance if you
   a. remove 7 $\square$ counters from the original balance? $\underline{\quad}$
   b. add 3 $\square$ counters to the original balance? $\underline{\quad}$
34. Write each number in standard notation and in number-and-word notation.

<table>
<thead>
<tr>
<th>Number</th>
<th>Standard Notation</th>
<th>Number-and-Word Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10^5$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$10^9$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$6 \times 10^7$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$3.2 \times 10^6$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

35. Use the graph to answer the questions.

a. How many kilometers did Jean travel in the first hour of the trip? ______

b. How far did Jean travel in all? ______

36. Use the following data to make a line graph.

<table>
<thead>
<tr>
<th>Word Study Test</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Correct Answers (out of 20)</td>
<td>15</td>
<td>10</td>
<td>20</td>
<td>15</td>
<td>5</td>
</tr>
</tbody>
</table>
Operations in the Klasies Caves

Recently, archaeologists were studying cave art near the Klasies River in South Africa. They discovered what looked like number sentences on the wall of a cave. The numbers were written with the same digits as ours, but the symbols showed that the operations were different. Several number sentences are listed below. Use these samples to relate our operations symbols with the symbols from the cave.

\[(78 \circ 3 \uparrow 18) \div 2 = 64\]
\[(10 \downarrow 5) \circ 3 = 5\]
\[90 \downarrow 6 = 4 \circ (24 \uparrow 16) \circ 3\]

List what operation each Klasies River symbol represents. Explain how you figured out the symbols. Show all of your work.

Try This

Write a true number sentence using all of the symbols at least once.