Unit 3 Study Guide

Name ______________________

Fill in the missing number in the Fact Triangle.

1.

\[
\begin{array}{c}
8 \\
\ast, / \\
5 \\
\end{array}
\]

2.

\[
\begin{array}{c}
36 \\
\ast, / \\
6 \\
\end{array}
\]

3.

\[
\begin{array}{c}
45 \\
\ast, / \\
5 \\
\end{array}
\]

Write “T” if the following is a true number sentence, “F” if it is false, or “?” if you can’t tell.

4. \(3 \ast 5 = 18\)   

5. \(8 \ast 6\)
Write “T” if the following is a true number sentence, “F” if it is false, or “?” if you can’t tell.

6.  $2 \times 8$

7.  $4 \times 6 < 24$

8.  $5 \times (4 + 7) = 45$

9.  $4 \times 12 / 2 > 7 \times 4$

Make a true sentence by filling in the missing number.

10.  $\_\_\_ = (7 \times 4) + 11$

11.  $\_\_\_ = (14 - 9) \times 4$

12.  $(11 - 5) + (10 / 2) = \_\_\_\_\_\_

13.  $(9 / 3) \times (10 / 2) = \_\_\_\_\_\_

Make a true sentence by inserting parentheses.

14.  $30 - 18 + 8 = 20$

15.  $55 - 8 + 13 = 60$

16.  $56 / 8 + 15 = 22$

17.  $3 \times 5 + 39 = 132$
18. Keith asked his classmates to estimate the number of cans of soda they drink each week. He recorded the information on the bar graph below. Use Keith’s bar graph to answer the following questions:

Soda Consumed Each Week

<table>
<thead>
<tr>
<th>Number of Cans of Soda</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Students</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

a. What is the range of the number of cans?
b. What is the mode of the number of cans?
c. What is the median of the number of cans?

19. The food sales records for one day at Tripoli Stadium showed that 2,627 turkey sandwiches were sold. A total of 4,151 sandwiches were sold that day. How many sandwiches sold that day were not turkey?

Answer: _________ sandwiches

Number model: _________

20. The temperature on July 23rd was 15°C warmer than it was on June 23rd in a city. If the temperature was 29°C on June 23rd, then what was the temperature in that city on July 23rd?

Answer: _________ °C

Number model: _________
21. Find the rule and complete the table.

<table>
<thead>
<tr>
<th>Rule</th>
<th>in</th>
<th>out</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

22. List all the factors of 12.

Find the solution of each open sentence.

23. $18 = 12 + x$

24. $4 \times m = 28$

25. $x / 9 = 2$

26. $z / 7 = 7$

27. $16 - x = 2$

28. $2 \times 6 = 40 - t$
29. Use the map and map scale to answer the following questions:

- a. The distance between Missoula and Billings is about _______ inch(es) on the map. That is about _______ miles.
- b. The distance between Glasgow and Bozeman is about _______ inch(es) on the map. That is about _______ miles.

30. Complete the Venn diagram. Use at least 10 numbers.
31. **Name That Number**

Kato was playing a game of *Name That Number*. He had the following five number cards and target number:

<table>
<thead>
<tr>
<th>Cards</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

His teacher, Ms. Ayers, asked everyone to record their thinking. Here is what Kato wrote:

\[
5 + 2 + 6 + 8 + 3 = 18 \\
(8 / 2 + 5) * 5 - 3 = 18 \\
(8 - 5 + 3) * 6 / 2 = 18
\]

a. Ms. Ayers saw that Kato had made mistakes in writing two of his number sentences.
   - Circle the two number sentences with mistakes.
   - Explain in words how Kato can correct each number sentence. (Hint: The numbers are in correct order.)

b. Describe two more ways to reach the target number of 18.
   You do NOT have to use all 5 numbers.