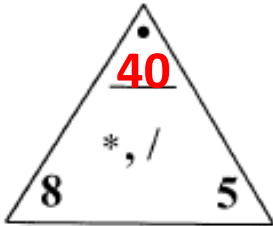


Unit 3 Study Guide

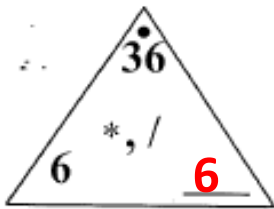
Name Answer Key

Fill in the missing number in the Fact Triangle.

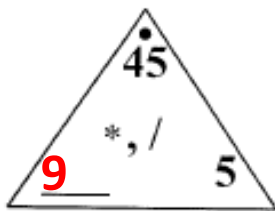
1.



2.



3.



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

4. $3 * 5 = 18$ **F**

5. $8 * 6$ **?**

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

6. $2 * 8$?

7. $4 * 6 < 24$ F

8. $5 * (4 + 7) = 45$ F

9. $4 * 12 / 2 > 7 * 4$ F
 $24 > 28$

Make a true sentence by filling in the missing number.

10. 39 = $(7 * 4) + 11$

11. 20 = $(14 - 9) * 4$

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

13. $(9 / 3) * (10 / 2) =$ 15

Make a true sentence by inserting parentheses.

14. $(30 - 18) + 8 = 20$

15. $(55 - 8) + 13 = 60$

16. $(56 / 8) + 15 = 22$

17. $3 * (5 + 39) = 132$

21. Find the rule and complete the table.

| in | out |
|----------|-----------|
| 9 | 18 |
| 2 | 4 |
| 4 | 8 |
| 8 | 16 |
| 7 | 14 |
| 6 | 12 |

| |
|-------------|
| Rule |
| *2 |

22. List all the factors of 12. **1, 2, 3, 4, 6, 12**

Find the solution of each open sentence.

23. $18 = 12 + x$ **$x = 6$**

24. $4 * m = 28$ **$m = 7$**

25. $x/9 = 2$ **$x = 18$**

26. $z/7 = 7$ **$z = 49$**

27. $16 - x = 2$ **$x = 14$**

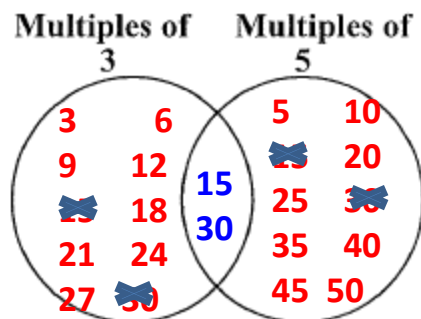
28. $2 * 6 = 40 - t$ **$t = 28$**

29. Use the map and map scale to answer the following questions:



- a. The distance between Missoula and Billings is about 2 inch(es) on the map.
That is about 400 miles.
- b. The distance between Glasgow and Bozeman is about 2 ½ inch(es) on the map.
That is about 500 miles.

30. Complete the Venn diagram. Use at least 10 numbers.



Part C: Challenge (Bonus)

31. Name That Number

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

Cards



Target



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

$$\begin{array}{l} 5+2+6+8+3=18 \rightarrow (5+2+6+8)-3=18 \\ (8/2+5)*5-3=18 \rightarrow 8/2+5*(5-3)=18 \\ (8-5+3)*6/2=18 \end{array}$$

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.

$$6 \times 3 = 18$$

$$(3+2) + 5 + 8 = 18$$

Explain: Kato needs to add parentheses around the first 4 numbers in the first number sentence and change the last operation from addition to subtraction to correct it. In the second number sentence, she needs to remove the parentheses around the first 3 numbers and move it to the last two numbers to correct it.