

# Multiplicative Comparisons

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 24

## Q Quick Review

A **multiplicative comparison** tells how many **times** as many one amount is compared to another. When we say 12 is 4 **times as many** as 3, it means  $4 \times 3 = 12$ . The little word “**times**” is your clue to **multiply**. If you already know the total and one part, you can **divide** to find how many times bigger it is: since  $12 \div 3 = 4$ , we know 12 is 4 times as many as 3. So multiplying and dividing are two ways to look at the same comparison.

◇ **Example:** 24 is how many times as many as 6?

⇒ Let's think about what the question is really asking. We want to know how many groups of 6 fit inside 24. That is a division question:  $24 \div 6 = 4$ . We can check it the other way too —  $4 \times 6 = 24$ , which matches. So 24 is 4 times as many as 6.

**Answer:** 4 times

## PRACTICE

Find each missing value. Multiply or divide to compare.

- |                                       |       |   |       |
|---------------------------------------|-------|---|-------|
| 1. $2 \times 3$                       | _____ | 11. 42 is 6 times as many as what number? | _____ |
| 2. $4 \times 5$                       | _____ | 12. 63 is 7 times as many as what number? | _____ |
| 3. $8 \times 3$                       | _____ | 13. $4 \times 12$                         | _____ |
| 4. $5 \times 7$                       | _____ | 14. $3 \times 25$                         | _____ |
| 5. $6 \times 9$                       | _____ | 15. 81 is how many times as many as 9?    | _____ |
| 6. 35 is how many times as many as 7? | _____ | 16. $6 \times 11$                         | _____ |
| 7. 48 is how many times as many as 6? | _____ | 17. $5 \times 14$                         | _____ |
| 8. 72 is how many times as many as 9? | _____ | 18. 96 is how many times as many as 8?    | _____ |
| 9. $7 \times 8$                       | _____ | 19. $7 \times 13$                         | _____ |
| 10. $9 \times 6$                      | _____ | 20. $8 \times 15$                         | _____ |

## ◆ Word Problems

21. Mia has 3 goldfish. Her brother has 4 times as many goldfish as Mia. How many goldfish does her brother have? \_\_\_\_\_
22. A tall oak tree is 56 feet tall. That is 8 times as tall as a young maple tree. How tall is the maple tree? \_\_\_\_\_
23. Liam collected 9 shells at the beach. His friend collected 6 times as many shells. How many shells did his friend collect? \_\_\_\_\_
24. A movie ticket costs 45 dollars for a family pack. A single ticket costs 5 dollars. How many times as much is the family pack compared to a single ticket? \_\_\_\_\_



## Answer Keys

- |                                     |  |
|-------------------------------------|--|
| 1. <input type="text" value="6"/>   | 13. <input type="text" value="48"/>              |
| 2. <input type="text" value="20"/>  | 14. <input type="text" value="75"/>              |
| 3. <input type="text" value="24"/>  | 15. <input type="text" value="9"/>               |
| 4. <input type="text" value="35"/>  | 16. <input type="text" value="66"/>              |
| 5. <input type="text" value="54"/>  | 17. <input type="text" value="70"/>              |
| 6. <input type="text" value="5"/>   | 18. <input type="text" value="12"/>              |
| 7. <input type="text" value="8"/>   | 19. <input type="text" value="91"/>              |
| 8. <input type="text" value="8"/>   | 20. <input type="text" value="120"/>             |
| 9. <input type="text" value="56"/>  | 21. <input type="text" value="12 goldfish"/>     |
| 10. <input type="text" value="54"/> | 22. <input type="text" value="7 feet"/>          |
| 11. <input type="text" value="7"/>  | 23. <input type="text" value="54 shells"/>       |
| 12. <input type="text" value="9"/>  | 24. <input type="text" value="9 times as much"/> |

### Step-by-Step Explanations

- |  |  |
|--|--|
| <p>1. 2 times as many as 3 means <math>2 \times 3 = 6</math>.</p> <p>2. 4 groups of 5 give <math>4 \times 5 = 20</math>.</p> <p>3. 8 times as many as 3 is <math>8 \times 3 = 24</math>.</p> <p>4. 5 groups of 7 make <math>5 \times 7 = 35</math>.</p> <p>5. 6 times as many as 9 is <math>6 \times 9 = 54</math>.</p> <p>6. Divide to compare: <math>35 \div 7 = 5</math>, so 35 is 5 times as many.</p> <p>7. <math>48 \div 6 = 8</math>, so 48 is 8 times as many as 6.</p> <p>8. <math>72 \div 9 = 8</math>, so 72 is 8 times as many as 9.</p> <p>9. 7 times as many as 8 is <math>7 \times 8 = 56</math>.</p> <p>10. 9 groups of 6 give <math>9 \times 6 = 54</math>.</p> <p>11. Work backward with division: <math>42 \div 6 = 7</math>.</p> <p>12. <math>63 \div 7 = 9</math>, so the missing number is 9.</p> <p>13. 4 times as many as 12 is <math>4 \times 12 = 48</math>.</p> <p>14. 3 groups of 25 make <math>3 \times 25 = 75</math>.</p> | <p>15. <math>81 \div 9 = 9</math>, so 81 is 9 times as many as 9.</p> <p>16. 6 times as many as 11 is <math>6 \times 11 = 66</math>.</p> <p>17. 5 groups of 14 give <math>5 \times 14 = 70</math>.</p> <p>18. <math>96 \div 8 = 12</math>, so 96 is 12 times as many as 8.</p> <p>19. 7 times as many as 13 is <math>7 \times 13 = 91</math>.</p> <p>20. 8 groups of 15 make <math>8 \times 15 = 120</math>.</p> <p>21. "4 times as many" tells us to multiply: <math>4 \times 3 = 12</math>. Her brother has 12 goldfish.</p> <p>22. We know the total and the multiplier, so we divide: <math>56 \div 8 = 7</math>. The maple tree is 7 feet tall.</p> <p>23. "6 times as many" means multiply: <math>6 \times 9 = 54</math>. His friend collected 54 shells.</p> <p>24. Divide to compare the two amounts: <math>45 \div 5 = 9</math>. The family pack costs 9 times as much.</p> |
|--|--|



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