

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

◆ 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

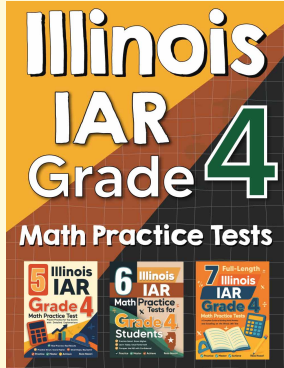
- | | |
|-------------------------------------|--|
| 1. <input type="text" value="6"/> | 13. <input type="text" value="48"/> |
| 2. <input type="text" value="20"/> | 14. <input type="text" value="75"/> |
| 3. <input type="text" value="24"/> | 15. <input type="text" value="9"/> |
| 4. <input type="text" 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

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