

# Multiplicative Comparison Word Problems

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Score: \_\_\_\_\_ / 24

## Quick Review

Word problems with “**times as many**” can be solved with **multiplication** or **division**. First decide what you **know** and what you are **looking for**. If you know the small amount and how many times bigger the other is, **multiply**. If you know the big amount and the small amount and want the comparison, **divide**. If you know the big amount and the multiplier and want the small amount, **divide**. Drawing a quick bar model or saying the sentence out loud can help you choose the right operation.

◇ **Example:** Noah read 6 books this month. Ava read 5 times as many books as Noah. How many books did Ava read?  
 ⇒ Start by underlining the clue words. “5 times as many” tells us this is a multiplication problem. Noah’s amount is 6, and Ava read 5 times that much, so we compute  $5 \times 6 = 30$ . Ava read 30 books. A quick check:  $30 \div 5 = 6$ , which is Noah’s amount, so our answer makes sense.

**Answer:** 30 books

## PRACTICE

Solve each comparison problem. Decide whether to multiply or divide.

- A cat naps for 8 hours. A sloth sleeps 3 times as long. How long does the sloth sleep? \_\_\_\_\_
- Sam has 6 stickers. Eli has 5 times as many. How many does Eli have? \_\_\_\_\_
- 30 apples is how many times as many as 6 apples? \_\_\_\_\_
- A blue rope is 9 m long. A red rope is 4 times as long. How long is the red rope? \_\_\_\_\_
- Tia jogged 5 laps. Her coach jogged 7 times as many. How many laps did the coach jog? \_\_\_\_\_
- 48 marbles is how many times as many as 8 marbles? \_\_\_\_\_
- A pencil costs 7 cents. A pen costs 6 times as much. How much is the pen? \_\_\_\_\_
- 54 is 9 times as many as what number? \_\_\_\_\_
- Maya has 4 books. Her teacher has 8 times as many. How many books does the teacher have? \_\_\_\_\_
- A small box holds 12 crayons. A big box holds 5 times as many. How many crayons does the big box hold? \_\_\_\_\_
- 10 stamps is how many times as many as 7 stamps? \_\_\_\_\_
- Leo ran 8 minutes. His sister ran 7 times as long. How many minutes did she run? \_\_\_\_\_
- 10 opposite sides of a square are how many times as many as 10 points? \_\_\_\_\_
- Any map is how many times as long as a model train is 9 times as long. How long is the map? \_\_\_\_\_
- Zoe has 11 ribbons. Her aunt has 6 times as many. How many ribbons does her aunt have? \_\_\_\_\_
- 17 minutes is how many times as many as what number? \_\_\_\_\_
- A jar holds 25 jellybeans. A bucket holds 4 times as many. How many jellybeans does the bucket hold? \_\_\_\_\_
- One envelope is how many times as many as 2 envelopes? \_\_\_\_\_
- 20 minutes is how many times as many as 6 seconds? \_\_\_\_\_

### Word Problems

- At the library, Jada checked out 7 books. Her older brother checked out 5 times as many books as Jada. How many books did her brother check out? \_\_\_\_\_
- A grown-up bike costs 60 dollars. That is 4 times as much as a used kids’ bike. How much does the used kids’ bike cost? \_\_\_\_\_



23. During swim practice, Carlos swam 8 laps. The team captain swam 6 times as many laps as Carlos. How many laps did the captain swim? \_\_\_\_\_

24. The art class made a banner that is 72 inches long. That is 3 times as long as a poster they made. How long is the poster? \_\_\_\_\_



## Answer Keys

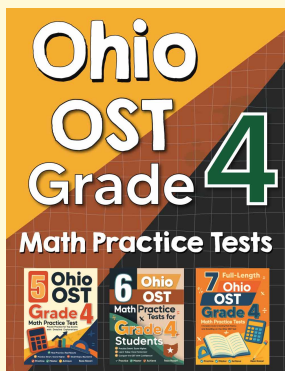
- |                |                    |
|----------------|--------------------|
| 1. 24 hours    | 13. 56 minutes     |
| 2. 30 stickers | 14. 8              |
| 3. 5           | 15. 54 inches      |
| 4. 36 m        | 16. 66 ribbons     |
| 5. 35 laps     | 17. 9              |
| 6. 6           | 18. 100 jellybeans |
| 7. 42 cents    | 19. 96 cranes      |
| 8. 6           | 20. 15             |
| 9. 32 books    | 21. 35 books       |
| 10. 60 crayons | 22. \$15           |
| 11. 9          | 23. 48 laps        |
| 12. 45 cm      | 24. 24 inches      |

### Step-by-Step Explanations

- |  |   |
|--|---|
| <p>1. "3 times as long" means multiply: <math>3 \times 8 = 24</math> hours.</p> <p>2. "5 times as many" means multiply: <math>5 \times 6 = 30</math>.</p> <p>3. Divide to compare: <math>30 \div 6 = 5</math>.</p> <p>4. Multiply: <math>4 \times 9 = 36</math> meters.</p> <p>5. Multiply: <math>7 \times 5 = 35</math> laps.</p> <p>6. Divide: <math>48 \div 8 = 6</math>.</p> <p>7. Multiply: <math>6 \times 7 = 42</math> cents.</p> <p>8. Divide to find the small amount: <math>54 \div 9 = 6</math>.</p> <p>9. Multiply: <math>8 \times 4 = 32</math> books.</p> <p>10. Multiply: <math>5 \times 12 = 60</math> crayons.</p> <p>11. Divide: <math>63 \div 7 = 9</math>.</p> <p>12. Multiply: <math>3 \times 15 = 45</math> cm.</p> <p>13. Multiply: <math>7 \times 8 = 56</math> minutes.</p> <p>14. Divide: <math>80 \div 10 = 8</math>.</p> | <p>15. Multiply: <math>9 \times 6 = 54</math> inches.</p> <p>16. Multiply: <math>6 \times 11 = 66</math> ribbons.</p> <p>17. Divide: <math>72 \div 8 = 9</math>.</p> <p>18. Multiply: <math>4 \times 25 = 100</math> jellybeans.</p> <p>19. Multiply: <math>8 \times 12 = 96</math> cranes.</p> <p>20. Divide to compare: <math>90 \div 6 = 15</math>.</p> <p>21. "5 times as many" means multiply: <math>5 \times 7 = 35</math>. Her brother checked out 35 books.</p> <p>22. We know the big amount and the multiplier, so divide: <math>60 \div 4 = 15</math>. The kids' bike costs \$15.</p> <p>23. Multiply because of "6 times as many": <math>6 \times 8 = 48</math>. The captain swam 48 laps.</p> <p>24. Divide to find the smaller length: <math>72 \div 3 = 24</math>. The poster is 24 inches long.</p> |
|--|---|



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