

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? _____
- 14 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? _____
- 7 times this number is 49. What is the number? _____
- A jar holds 25 jellybeans. A bucket holds 4 times as many. How many jellybeans does the bucket hold? _____
- One envelope has paper that is 3 cm long. A stack of 8 envelopes is how many times as long 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

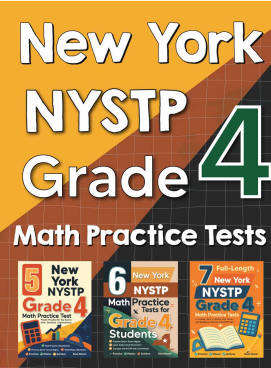
- | | |
|----------------|--------------------|
| 1. 24 hours | 13. 56 minutes |
| 2. 30 stickers | 14. 8 |
| 3. 5 | 15. 54 inches |
| 4. 36 m | 16. 66 ribbons |
| 5. 35 laps | 17. 9 |
| 6. 6 | 18. 100 jellybeans |
| 7. 42 cents | 19. 96 cranes |
| 8. 6 | 20. 15 |
| 9. 32 books | 21. 35 books |
| 10.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

Step-by-Step Explanations

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



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