

Understanding Division

Division is sharing equally. “ $24 \div 6$ ” asks one of two things: how many in each group if we make 6 groups, or how many groups of 6 fit into 24. Both meanings give the same answer.


| Word | Meaning |
|----------|--|
| Dividend | The number being shared (the total) |
| Divisor | The number you divide by (the group size or group count) |
| Quotient | The answer to a division problem |

Key Concepts

1. Division is splitting a number into *equal* groups. The total being shared is the **dividend**; the size of each group (or the number of groups) is the **divisor**; the answer is the **quotient**.
2. Two ways to read $24 \div 6$: *Sharing* (split 24 into 6 groups; each group gets 4). *Grouping* (how many groups of 6 are in 24; the answer is 4).
3. Division is the **inverse** of multiplication. If $6 \times 4 = 24$, then $24 \div 6 = 4$ and $24 \div 4 = 6$.
4. Special rules: any number divided by 1 is itself. *Zero divided by anything (not zero) is 0*. You can never divide by 0.


Worked Examples

① $18 \div 3$

 Ask yourself: “How many 3’s make 18?” Count by 3’s until you hit 18: 3, 6, 9, 12, 15, 18 — that’s six counts. So $18 \div 3 = 6$. Equivalently, if you shared 18 items among 3 friends, each would get 6.


 **Answer: 6**

② $24 \div 6$

 Use the multiplication you know: “6 times *what* equals 24?” That’s the same as $24 \div 6$. From the times table, $6 \times 4 = 24$, so $24 \div 6 = 4$. Sharing 24 items among 6 groups gives 4 per group.

 **Answer: 4**

③ $0 \div 5$

 This one is a rule worth memorizing. Zero divided by any non-zero number is always 0, because there are no items to share — each of the 5 groups gets 0 items. (Watch out: $5 \div 0$ is *undefined*. You cannot divide by zero.)

 **Answer: 0**

Practice Problems

Find each quotient.

- | | | | |
|----------------|-------|-----------------|-------|
| 1. $10 \div 2$ | _____ | 7. $28 \div 7$ | _____ |
| 2. $15 \div 5$ | _____ | 8. $48 \div 8$ | _____ |
| 3. $21 \div 3$ | _____ | 9. $20 \div 5$ | _____ |
| 4. $32 \div 4$ | _____ | 10. $54 \div 6$ | _____ |
| 5. $45 \div 9$ | _____ | 11. $0 \div 7$ | _____ |
| 6. $36 \div 6$ | _____ | 12. $63 \div 9$ | _____ |

Study Tips

- 👉 If you forget a division fact, ask: “*divisor* times *what* equals *dividend*?” That’s the same question as the division, but easier to answer from memorized times tables.
- 👉 Drawing equal groups with dots or circles is a great strategy when the numbers feel hard. Sharing physical objects works even better.
- 👉 Zero divided by a number is 0; a number divided by 1 is itself. Don’t try to divide *by* 0 — it has no answer.

Word Problems

1. Mom has 24 strawberries to share equally among 4 children. How many strawberries does each child get?

Answer: _____

2. A teacher has 30 pencils. She gives each student 5 pencils. How many students get pencils?

Answer: _____

Answer Key — with Friendly Explanations**Practice Problems**

1. $2 \times 5 = 10$, so $10 \div 2$.

 **Answer:** 5

2. $5 \times 3 = 15$.

 **Answer:** 3

3. $3 \times 7 = 21$.

 **Answer:** 7

4. $4 \times 8 = 32$.

 **Answer:** 8

5. $9 \times 5 = 45$.

 **Answer:** 5

6. $6 \times 6 = 36$.

 **Answer:** 6

7. $7 \times 4 = 28$.

 **Answer:** 4

8. $8 \times 6 = 48$.

 **Answer:** 6

9. $5 \times 4 = 20$.

 **Answer:** 4

10. $6 \times 9 = 54$.

 **Answer:** 9

11. Zero divided by any non-zero number is 0.

 **Answer:** 0

12. $9 \times 7 = 63$.

 **Answer:** 7**Word Problems**1. Equal sharing: $24 \div 4 = 6$. Each child gets 6. **Answer:** 6 *strawberries*2. Grouping: $30 \div 5 = 6$. Six students get pencils. **Answer:** 6 *students*

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