Addition

Addition is a way of putting numbers together to find the total or the sum. When we add two numbers, we combine them to find out how many there are altogether.

For example: 1 + 2 = 3 When we add 1 and 2 together, we get a total of 3.

Here are a few more examples:

1. 3 + 1 = 4
   - If we have 3 apples and someone gives us 1 more, we have a total of 4 apples.
2. 2 + 2 = 4
   - If we have 2 cars and we get 2 more cars, we have 4 cars in total.
3. 5 + 0 = 5
   - Adding 0 to any number doesn't change the number. So, if we have 5 toys and we add 0 more, we still have 5 toys.
4. 4 + 1 + 2 = 7
   - If we have 4 stickers, someone gives us 1 more, and then we find 2 more, we have 7 stickers in total.

Remember, addition is all about combining numbers to find the total. You can use your fingers, objects, or even drawings to help you understand and solve addition problems. Keep practicing, and you'll become an addition expert!

Addition PRACTICE

Instructions: Solve the following addition problems.

1. $3 + 5 =$ _____

2. $7 + 2 =$ _____

3. $9 + 4 =$ _____

4. $6 + 8 =$ _____

5. $1 + 10 =$ _____

6. Fill in the missing number: _____ $+ 7 = 12$

7. Fill in the missing number: $9 +$ _____ $= 15$

8. Fill in the missing number: _____ $+ 4 = 11$

9. True or False: The order of numbers does not affect the sum in addition. _____

10. True or False: Adding zero to any number does not change its value. _____

11. Solve the word problem: Sally has 5 apples. She buys 3 more apples at the store. How many apples does Sally have in total? _____

12. Solve the word problem: There are 7 students in the classroom. 3 more students join the class. How many students are there now? _____

13. Write the addition fact for the following repeated addition: $4 + 4 + 4 + 4 =$ _____

14. Write the addition fact for the following repeated addition: $6 + 6 + 6 =$ _____

15. Solve the following problem: Jack has 10 marbles. He gives 4 marbles to Sarah. How many marbles does Jack have left? _____

Subtraction

Subtraction is the opposite of Addition. It's a way of taking away or removing numbers to find out how many are left. It helps us understand the difference between two quantities.

Here are some examples:

1. 6 - 2 = 4
   - If we have 6 toys and we give away 2 toys, we have 4 toys left.
2. 8 - 3 = 5
   - If we have 8 balloons and 3 balloons pop, we have 5 balloons left.
3. 10 - 0 = 10
   - Subtracting 0 from any number doesn't change the number. So, if we have 10 candies and we don't eat or give away any, we still have 10 candies.
4. 9 - 4 - 2 = 3
   - If we have 9 marbles, we give away 4 marbles, and then we lose 2 more, we are left with 3 marbles.

You can think of subtraction as taking away or removing things to find out what is left. By mastering subtraction, we can handle everyday calculations and develop important mathematical skills that are useful for the rest of your life!

Subtraction PRACTICE

Instructions: Solve the following Subtraction problems.

1. 8 – 3 = _____

2. 12 – 6 = _____

3. 15 – 9 = _____

4. 20 – 7 = _____

5. 11 – 4 = _____

6. Fill in the missing number: 10 – _____ = 6

7. Fill in the missing number: _____ – 5 = 9

8. Fill in the missing number: 15 – _____ = 8

9. True or False: In subtraction, the order of numbers affects the difference. _____

10. True or False: Subtracting zero from any number does not change its value. _____

11. Solve the word problem: John had 8 toy cars. He gave away 3 of them. How many toy cars does John have now? _____

12. Solve the word problem: Lisa had 15 stickers. She lost 6 of them. How many stickers does Lisa have left? _____

13. Write the subtraction fact for the following repeated subtraction: 10 – 2 – 2 – 2 = _____

14. Write the subtraction fact for the following repeated subtraction: 18 – 3 – 3 – 3 = _____

15. Solve the following problem: There are 20 children in a class. If 7 children go home early, how many children are left in the class? _____

Multiplication

Multiplication is a way of quickly adding equal groups or sets of objects to find the total. It helps us when we have the same number repeated several times.

Here are some examples:

1. 5 x 1 = ?
   - When multiplying by 1 we have a rule to use: <u>Anything times one equals the same number.</u> So, <u>5 x 1 = 5.</u>
2. 2 x 3 = ?
   - <u>2 times 3 is really 2+2+2</u>, think of multiplying as adding a number as many times as the number you're multiplying with. <u>2 x 3 = 6.</u>
3. 4 x 2 = ?
   - 4 times 2 is adding 4 two times. <u>4 + 4 = 8.</u>
4. 5 x 0 = ?
   - Zero is a special nuumber, and has a special rule: <u>Anything times 0, equals 0.</u> So, <u>5 x 0 = 0.</u>
5. 3 x 4 x 2 = ?
   - Lets break up this question. Starting from the left we have 3 x 4, which equals 12. Now we have 12 x 2, <u>which equals 24.</u>

Multiplication is important because it helps us when we need to count or combine equal groups of things quickly. It saves time and helps us solve problems more efficiently.

Multiplication PRACTICE

Instructions: Solve the following multiplication problems.

1. 12 x 3 = _____

2. 5 x 7 = _____

3. 8 x 4 = _____

4. 9 x 6 = _____

5. 2 x 10 = _____

6. Fill in the missing number: 6 x _____ = 54

7. Fill in the missing number: _____ x 8 = 56

8. Fill in the missing number: 9 x _____ = 63

9. True or False: When you multiply any number by 0, the answer is always 0. _____

10. True or False: The product of two even numbers is always an even number. _____

11. Solve the word problem: Mary bought 4 packs of pencils. Each pack contains 6 pencils. How many pencils did Mary buy in total? _____

12. Solve the word problem: A pizza shop sells pizzas for $8 each. If Sarah buys 5 pizzas, how much will she pay in total? _____

13. Write the multiplication fact for the following repeated addition: 3 + 3 + 3 + 3 = _____

14. Write the multiplication fact for the following repeated addition: 7 + 7 + 7 = _____

15. Solve the following problem: A farmer has 4 baskets. Each basket contains 12 apples. How many apples does the farmer have in total? _____

Divison

Division is the opposite of multiplication. It's a way of splitting big numbers into smaller numbers.

Here are some examples:

1. 12 ÷ 3 = 4
   - If we have 12 toys and we want to share them equally among 3 children, each child will get 4 toys.
2. 16 ÷ 4 = 4
   - If we have 16 pencils and we want to distribute them equally among 4 students, each student will get 4 pencils.
3. 10 ÷ 2 = 5
   - If we have 10 candies and we want to split them equally between 2 friends, each friend will get 5 candies.
4. 20 ÷ 5 = 4
   - If we have 20 stickers and we want to divide them equally among 5 children, each child will get 4 stickers.

Division is important in math because it helps us split things into equal parts and figure out how many groups we can make from a given quantity. It also helps us solve problems related to sharing, dividing, and finding out how much each person gets.

Divison PRACTICE

1. $12 \div 3 =$ _____

2. $15 \div 5 =$ _____

3. $24 \div 4 =$ _____

4. $21 \div 7 =$ _____

5. $30 \div 6 =$ _____

6. Fill in the missing number: $18 \div$ _____ $= 6$

7. Fill in the missing number: _____ $\div 8 = 4$

8. Fill in the missing number: $45 \div$ _____ $= 9$

9. True or False: In division, the number being divided is called the dividend. _____

10. True or False: Dividing a number by 1 always gives the same number as the quotient. _____

11. Solve the word problem: There are 24 cookies, and each plate can hold 6 cookies. How many plates will be needed to evenly distribute all the cookies? _____

12. Solve the word problem: Sara has 36 apples, and she wants to share them equally among 6 friends. How many apples will each friend receive? _____

13. Write the division fact for the following repeated subtraction: $16 \div 4 =$ _____

14. Write the division fact for the following repeated subtraction: $27 \div 3 =$ _____

15. Solve the following problem: There are 50 chocolates, and they need to be divided equally into 5 gift boxes. How many chocolates will be in each gift box? _____

Order of Operations

The <u>Order of Operations</u> is a set of rules that tells us the order in which we should perform mathematical operations in a problem. The acronym <u>PEMDAS</u> is often used to remember the order from left to right: <u>Parentheses, Multiplication and Division, and Addition and Subtraction.</u>

<u>Here are some examples:</u>

- $(1 + 1) \times (3 \times 2) = ?$

    - Parentheses are always first in order, so we solve the inside first: <u>(2) x (6) = 12.</u>

- $(5 - 3) \div 12 = ?$

    - Again, parentheses are always first in order, so: <u>(2) ÷ 12 = 6.</u>

<u>Solve the following problems using the order of operations. (Remember to follow the PEMDAS order.)</u>

1. $5 + 3 \times 2 =$ _____

2. $(6 + 2) \times 4 - 3 =$ _____

3. $12 \div 3 + 2 \times 5 =$ _____

4. $8 - 2 \times (4 + 1) =$ _____

5. $4 \times (6 - 2) + 3 =$ _____

6. $10 \div 2 \times 3 - 4 =$ _____

7. $7 + 2 \times 3 \div (4 - 1) =$ _____

8. $(5 + 3) \times (6 - 2) \div 4 =$ _____