Properties of Division

Understanding the Properties of Division

Property 1: Division of a Number by 1

- Any number divided by 1 gives the number itself.

  Example: 9 ÷ 1 = 9

Property 2: Division of a Number by Itself

- When any number is divided by itself, the answer is always 1.

  Example: 8 ÷ 8 = 1

Property 3: Division of 0 by Any Number

- 0 divided by any number is always 0.

  Example: 0 ÷ 6 = 0

Property 4: Division of a Number by 0 is Not Possible

- We cannot divide any number by 0. It is not defined.

  Example: 12 ÷ 0 is not possible

Property 5: Division is Not Commutative

- In multiplication, numbers can be swapped. But in division, order matters.

  Example: 12 ÷ 3 = 4 but 3 ÷ 12 = 0.25 (not same for class 3 level)

Examples with Solutions

Example 1

➢ **What is 10 ÷ 1?**

✓ 10 ÷ 1 = 10

Property used: Division by 1

Example 2

➢ **Divide 7 by itself**

✓ 7 ÷ 7 = 1

Property used: Division by the same number

Example 3

➢ **Divide 0 by 4**

✓ $0 \div 4 = 0$

Property used: 0 divided by any number is 0

Example 4

➢ **Can we divide 5 by 0?**

✓ $5 \div 0$ is not possible

Property used: Division by 0 is not defined

Example 5

➢ **Is $16 \div 4$ the same as $4 \div 16$?**

✓ $16 \div 4 = 4$, but $4 \div 16$ is not the same

Property used: Division is not commutative

Summary Points

- Dividing a number by 1 gives the number itself.
- Dividing a number by itself always gives 1.
- 0 divided by any number is 0.
- We cannot divide any number by 0.
- Division is not commutative (we cannot change the order of numbers).