Prime and Composite Numbers

A prime number is a number that has exactly two factors: 1 and the number itself. In other words, a prime number can only be divided by 1 and itself without leaving any remainder.

For example, the number 7 is prime because its only factors are 1 and 7.

What are Composite Numbers?

A composite number is a number that has more than two factors. In other words, a composite number can be divided by 1, itself, and at least one other number.

For example, the number 6 is composite because it has the factors 1, 2, 3, and 6.

How to Identify Prime and Composite Numbers?

- To identify if a number is prime, check if it has only two factors: 1 and the number itself.
- To identify if a number is composite, check if it has more than two factors.

Properties of Prime and Composite Numbers

- Prime numbers are greater than 1 and have exactly two factors: 1 and the number itself.
- Composite numbers have more than two factors and can be divided evenly by numbers other than 1 and itself.
- 1 is neither prime nor composite because it only has one factor (1 itself).
- Every even number greater than 2 is a composite number because it can be divided by 2.

Example 1

Question: Is 11 a prime number?

Solution: The factors of 11 are 1 and 11.

Since 11 has only two factors, it is a prime number.

Answer: 11 is a prime number.

Example 2

Question: Is 18 a composite number?

Solution: The factors of 18 are 1, 2, 3, 6, 9, and 18.

Since 18 has more than two factors, it is a composite number. Answer: 18 is a composite number.

Summary Points

- A prime number has exactly two factors: 1 and the number itself.
- A composite number has more than two factors.
- The number 1 is neither prime nor composite.
- All even numbers greater than 2 are composite.