0.1 Factorization

If an integer dividend and an integer divisor results in an integer quotient, we say that the dividend is *divisible* by the divisor. For example is 6 divisible with 3 because $6 : 3 = 2$, and 40 is divsible with 10 because $40 : 10 = 4$. The concept of divisibility contributes to the definition of *prime numbers*:

0.1 Primtal

A natural number larger than 1, and only divisible by itself and 1, is a prime number.

Example

The first five prime numbers are $2, 3, 5, 7$ og 11.

0.2 Factorization

Factorization involves writing a number as the product of other numbers.

Example

Factorize 24 in three different ways.

Answer:

$$24 = 2 \cdot 12$$

$$24 = 3 \cdot 8$$

$$24 = 2 \cdot 3 \cdot 4$$

0.3 Prime factorization

Factorization involving prime factors only is called prime factorization.

Example

Prime factorize 12.

Answer:

$$12 = 2 \cdot 2 \cdot 3$$