

Prime numbers/Composite numbers

A **prime number** is a number (an integer) larger than one, whose only factors are the number itself and one.

A **composite number** is a number that can be factored into smaller prime numbers.

Ex.

7 is prime since it can only be factored into 1 and 7.

Ex.

12 is composite since it can be divided the following ways (more than one way)

$$12 = 12 \times 1 = 1 \times 12$$

$$12 = 2 \times 6$$

$$12 = 3 \times 4$$

$$12 = 2 \times 2 \times 3$$

A geometric interpretation of primes

Take a number of pebbles (or pennies, etc.) equal to the number in question and place them into rectangles. If the only possible rectangle is a straight line of all the pebbles, then the number is prime. If the pebbles can form more than one rectangle, it is composite.