

# Lowest Common Multiple

The lowest common multiple (LCM) is the **smallest integer** (whole number) that belongs to the multiplication table of two or more numbers.

## By listing multiples (small numbers)

 **Example** Find the LCM of 4 and 6

**1** List the multiples of each number in order:

Multiples of 4: 4, 8, **12**, 16, 20, ...

Multiples of 6: 6, **12**, 18, 24, 30, ...

**12** is the  
first number  
that is in  
both lists.

**2** Select the **lowest** number that is **common** to both lists. LCM of 4 and 6 = 12

## Using product of primes (large numbers)

 **Example** Find the LCM of 24 and 90

**1** Write both numbers as a product of primes:

$$24 = 2 \times 2 \times 2 \times 3 = 2^3 \times 3$$

$$90 = 2 \times 3 \times 3 \times 5 = 2^2 \times 3^2 \times 5$$

You can use a  
**factor tree** to  
help you with  
this step.

**2** Select the **largest power** of **every prime factor**.

**3** The LCM is the product of these factors:

$$2^3 \times 3^2 \times 5 = 360$$