



GREATEST COMMON FACTOR

Common factors are numbers that you can multiply together to produce another number. The numbers should divide exactly into two or more numbers.

Example of common factors:

The factors of 6 are 2 and 3, because $2 \times 3 = 6$

The factors of 12 are 3 and 4, because $3 \times 4 = 12$

The factors of 12 are also 2 and 6 because $2 \times 6 = 12$

The greatest common factor (GCF) is the largest number that is a factor of two or more numbers.

Example of greatest common factor:

The factors of 15 are 1, 3, 5, and 15.

The factors of 35 are 1, 5, 7, and 35.

Because 5 is the largest factor for both 15 and 35, it is the GCF.

To find the GCF of two numbers:

List the factors of each number.

Step 1:

$15 = 1, 3, 5, 15$

$30 = 1, 2, 3, 5, 6, 10, 15, 30$

Mark all of the factors that 15 and 30 both have in common.

Step 2:

$15 = 1, 3, 5, 15$

$30 = 1, 2, 3, 5, 6, 10, 15, 30$

The highest number that both sets have in common is the GCF which in this case, the GCF is 15.

Example 1

Find the greatest common factor of 20 and 32.

$20 = 1, 2, 4, 5, 10, 20$

$32 = 1, 2, 4, 8, 16, 32$

Greatest Common Factor: 4