

The **Greatest Common Factor (GCF)** of two numbers is the **largest factor** that the two numbers share.

Example: Find the GCF of 16 and 20

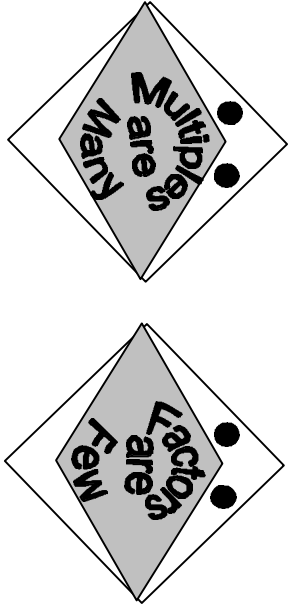
**Factors of 16:** 1, 2, 4, 8, 16

**Factors of 20:** 1, 2, 4, 5, 10, 20

**Common Factors of 16 and 20:** 1, 2, 4

**GCF of 16 and 20:** 4

One last thing... here's something we like to say to remember the difference between factors and multiples:



It's because a number is evenly divisible by only a few other numbers.

Hold on—I don't see any dots!



**21, 9, 4, 3, 2, 1 : 36 and 36** **21 and 21** **of 4 and 6**

**9, 3, 1 : 27** **9, 3, 1 : 27** **of 4 and 6**

**21, 9, 4, 3, 2, 1 : 21** **of 4 and 6**

Example: Find the common factors of 21 and 36

The **common factors** of two numbers are all of the numbers that are factors of both numbers.

The **factors** of a number are all of the counting numbers that will divide evenly into the number.

Examples:

**Factors of 6:** 1, 2, 3, 6

**Factors of 9:** 1, 3, 9

The **common multiples** of two numbers are all of the multiples that the two numbers share.

The **Least Common Multiple (LCM)** of two numbers is the **smallest multiple** that the two numbers share.

Example: Find the common multiples of 4 and 6

**Multiples of 4:** 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, ...

**Multiples of 6:** 6, 12, 18, 24, 30, 36, 42, 48, 54, 60, ...

**Common multiples of 4 and 6:** 12, 24, 36, 48, 60, ...

Example: Find the LCM of 15 and 10

**Multiples of 15:** 15, 30, 45, 60, 75, 90, ...

**Multiples of 10:** 10, 20, 30, 40, 50, 60, 70, 80, 90, ...

**Common multiples of 15 and 10:** 30, 60, 90, ...

**LCM of 15 and 10:** 30

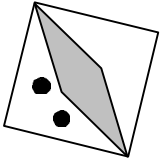
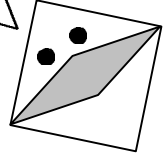


It means that the multiples are infinite.

What do the three dots mean?



...  
8, 9, 11, 12, 14, 15, 18, 21, 24, 27, 30, 33, ...  
8, 9, 11, 12, 14, 15, 18, 21, 24, 27, 30, 33, ...



We're going to show you how to work with multiples, factors, common multiples, common factors, LCM and GCF.

Welcome to the wonderful world of multiples and factors!!!

To find the **multiple** of a number, multiply the number by the counting numbers (1, 2, 3, 4, ...).

Examples: