

Greatest Common Factor

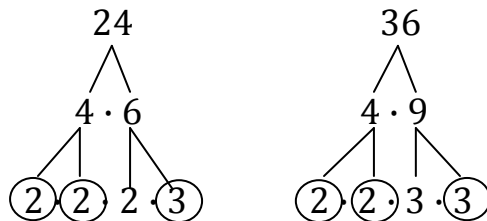
- Factors of a number are any numbers which divide into a given number evenly.

Factors of 24: 1, 2, 3, 4, 6, 8, 12, 24

Factors of 36: 1, 2, 3, 4, 6, 9, 12, 18, 36

- Common factors are 1, 2, 3, 4, 6, & 12. The largest of these (12) is the greatest common factor (GCF).
- Listing factors is one way to find the GCF.
- A second method uses prime factorizations of each number using a Factor Tree.
- To find the GCF, factor each number into its prime factors.
- Select each factor which occurs in every set of factors.

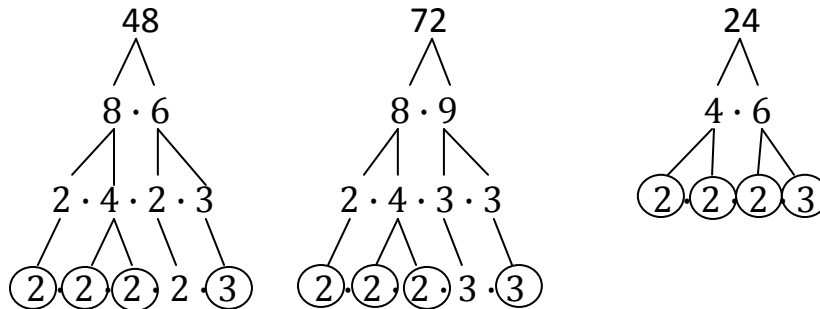
Example:



Matching Factors are:
 $2 \cdot 2 \cdot 3 = 12$

- The Greatest Common Factor will always be less than or equal to the smallest given number.

Example: Find the GCF of 48, 72, and 24.



GCF: $2 \cdot 2 \cdot 2 \cdot 3 = 24$

Arrows indicate "Divides Into":

