

1.5 (text pg.32) Greatest Common Factor (GCF)

Common Factors are factors that are shared by two or more numbers.

Ex. The common factors for (24 and 40) are 1 , 2 , 4 , 8

The greatest of the common factors is called the **Greatest Common Factor**.

Ex. The **GREATEST** common factor for 24 and 40 is **8**

2 ways to find GCF:

First Method (Old School):

List all the factors of both #'s, then find the largest # in both lists.

Ex. GCF (18, 60) =

18: 1, 2, 3, 6, 9, 18

60: 1, 2, 3, 4, 6, 12, 30, 60

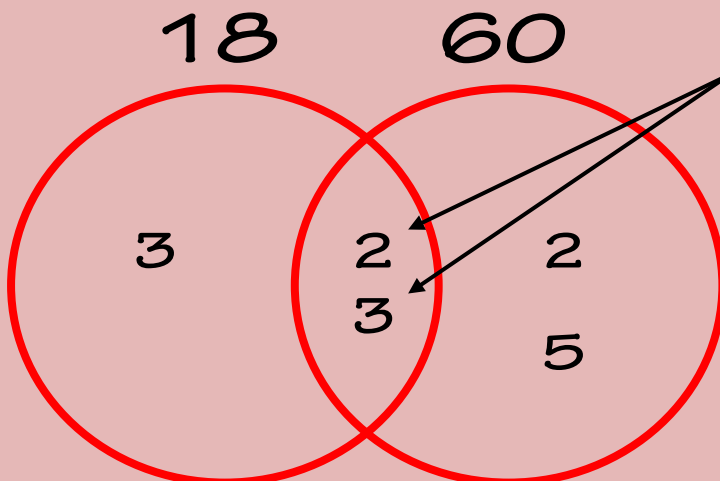
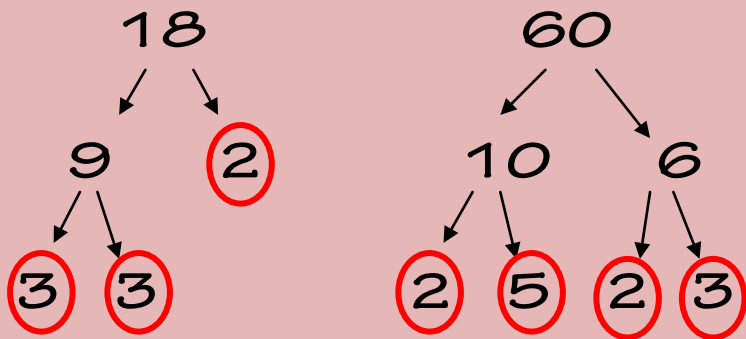
Second Method (New School):

Step 1: Make a factor tree for both numbers

Step 2: Use a Venn Diagram for common factors

Step 3: Multiply the #'s in the middle.

Ex: Ex. GCF (18, 60) =



The GCF is the product of the prime numbers that appear in both factorizations. (#'s in the middle).

$$2 \times 3 = 6$$

Two numbers whose GCF = 1 are called **relatively prime**.

(no # in the middle)