How to Find the Greatest Common Factor (GCF) in 5 Steps

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UNIT 1

Learning Target

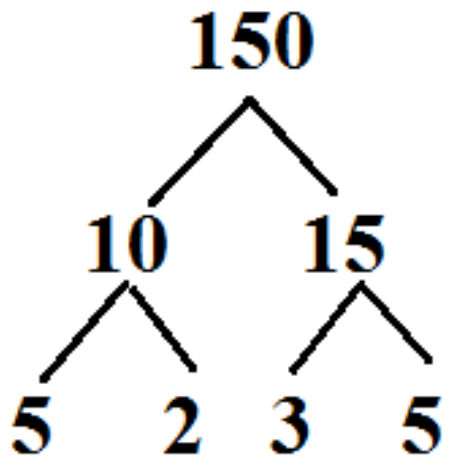
I can find the greatest common factor (GCF)

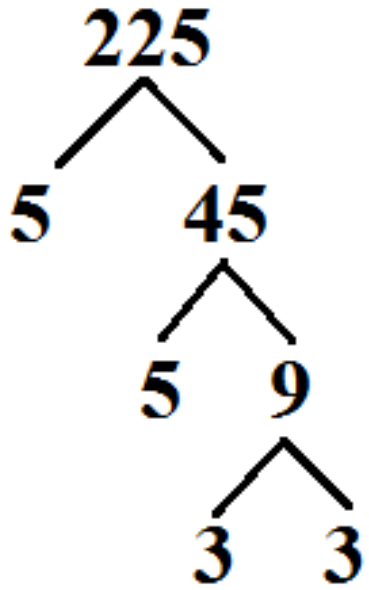
The greatest common factor is the largest number that divides exactly into two or more numbers.

Step 1

Find the two multiples for each number and make a factor tree

Find the greatest common factor of 150 and 225:





Step 2

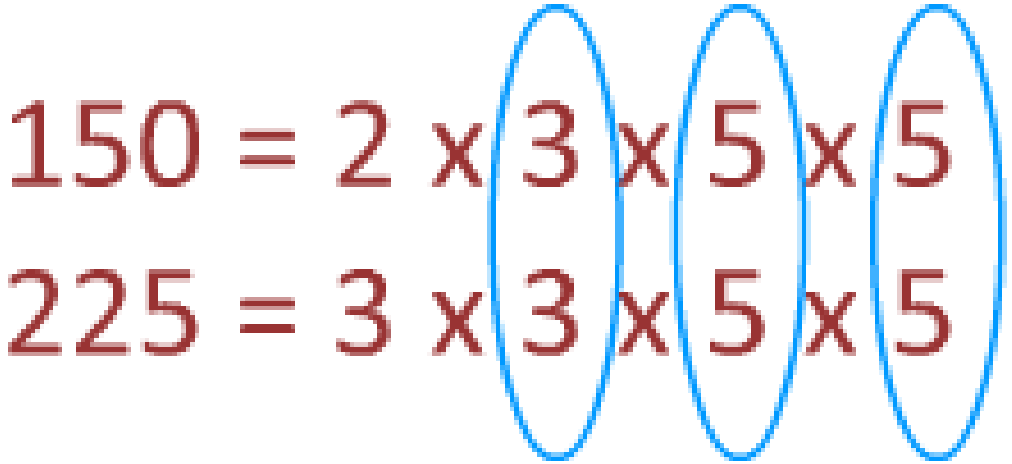
List out the prime factorization for each number.

$$150 = 2 \times 3 \times 5 \times 5$$

$$225 = 3 \times 3 \times 5 \times 5$$

Step 3

Circle the prime factors that each set of numbers has in common.



Step 4

Next, multiply the circled numbers

$3 \times 5 \times 5 = 75$

This tells us that the GCF of 150 and 225 is 75.

Tutorial Video

Prime factorization exercise | Factors and multiples | Pre-Algebra | Khan Academy