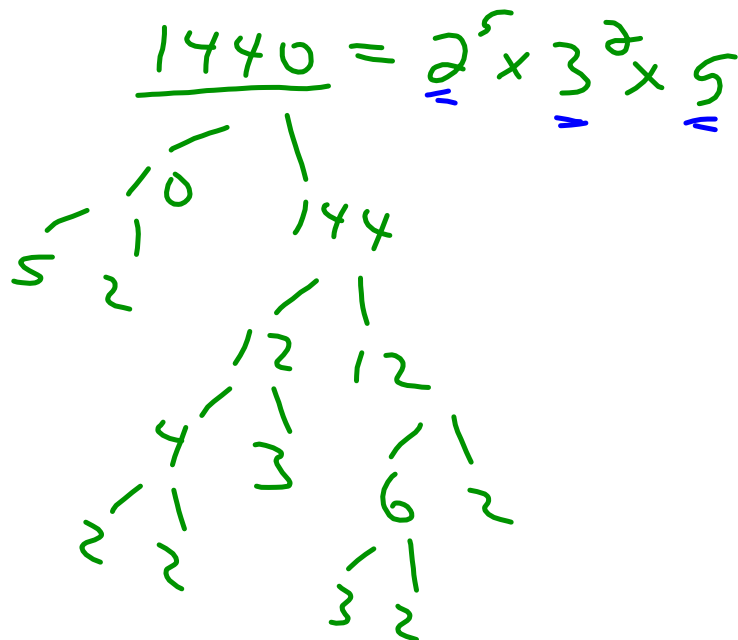
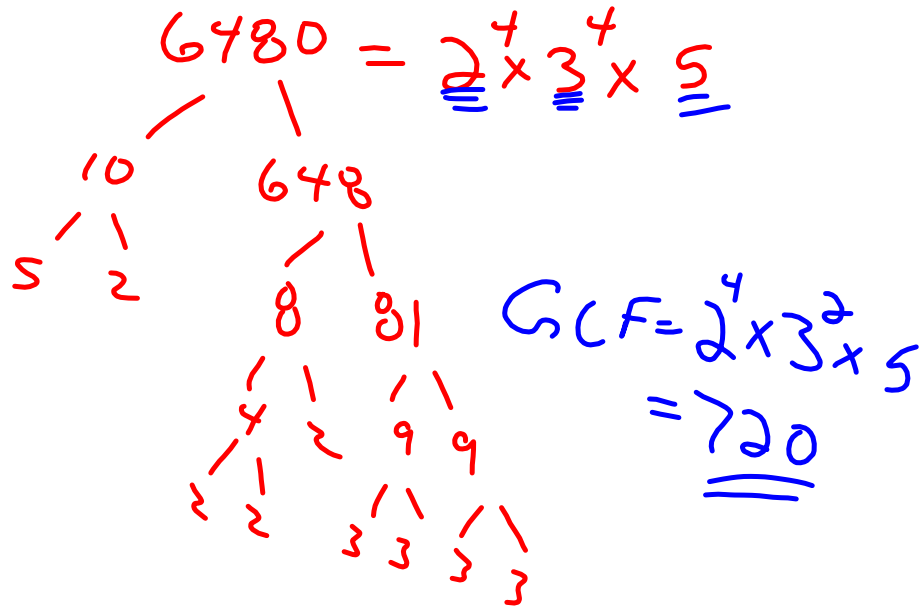


Check-Up...

Determine the GCF for 6480 and 1440



What is the Least Common Multiple?

The least common multiple is the least multiple that is the same for two or more numbers.

$$4 \text{ \& } 6$$

$$\begin{array}{l} \text{GCF} \\ = 2 \end{array}$$

$$\begin{array}{l} \text{LCM} \\ \underline{\underline{= 12}} \end{array}$$

Least Common Multiple

What is the least common multiple (LCM) of 4 and 6?

$$\begin{array}{c} 4 \\ / \quad \backslash \\ 2 \quad 2 \\ = 2^2 \times 7^3 \end{array} \quad \begin{array}{c} 6 \\ / \quad \backslash \\ 2 \quad 3 \\ = 2^1 \times 3 \times 7^5 \end{array} \quad \begin{array}{l} \text{LCM} = 2^2 \times 3^1 \times 7^5 \\ = \underline{\underline{12}} \end{array}$$

What is a sure fire method to come up with a common multiple...perhaps just not the LEAST common multiple?

Determine the least common multiple of 18, 20, and 30

Step #1 Write the prime factorization of each number.

Step #2 Circle the greatest power of each prime number.

Handwritten prime factorizations:

- 18: $18 = 2 \times 3 \times 3 = 2 \times 3^2$ (The 3^2 is circled in blue.)
- 20: $20 = 2 \times 2 \times 5 = 2^2 \times 5$ (The 2^2 is circled in blue.)
- 30: $30 = 2 \times 3 \times 5$ (The 2, 3, and 5 are underlined in blue.)

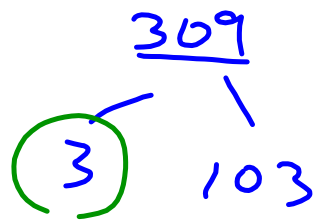
LCM calculation:

$$\text{LCM} = 3^2 \times 2^2 \times 5 = 180$$

GCF calculation:

$$\text{GCF} = 2$$

Determine the least common multiple of 120 & 309



LCM GCF
 $2^3 \times 3 \times 5 \times 103$ $= 3$
 $= 12360$

Practice Problems...

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#6, 8, 10, 11, 12, 16