Finding The LCM (Least Common Multiple):

A. Finding the LCM of two numbers, by definition, means finding the smallest number that both numbers can divide into evenly.

Ex [1] Find the LCM of 12 and 8.

a. In this example both 12 and 8 can divide evenly into the number 24. Notice that they can also divide into 48. But the LCM is 24.

B. There are some steps we can follow to make finding the LCM easier:

1. First, look to see if the larger number is a multiple of the smaller number. If it is then this is the LCM.
2. If not, then the LCM can be found by the following:

$$\frac{a \times b}{GCD}$$

3. See *Finding The GCD*.
4. Both of these numbers can be divided by the GCD making the problem much easier.
5. Notice, if the GCD is 1, then the answer is simply the product of the two numbers.

Ex [2] Find the LCM of 8 and 24.

a. In this case 8 can divide into 24 evenly, so the LCM is 24.

b. The answer is 24.

Ex [3] Find the LCM of 25 and 48.

a. Since 25 does not divide into 48 evenly, we need to find the GCD.

b. The GCD is 1. So the LCM is the product of the 2 numbers.

c. 25 x 48 = 1200. See *Multiplying By 25*.

d. The answer is 1200.

Ex [4] Find the LCM of 3, 6, and 9.

a. In this example, we should take it 2 numbers at a time. So looking at the first 2 numbers, we can see that 6 is the LCM of 3 and 6 since 6 is a multiple of 3. So now we need to focus on the last two numbers.

b. Since 6 does not divide into 9, we need to find the GCD.

c. The GCD is 3. So the LCM is (6 x 9)/3 or 2 x 9 = 18.

d. The answer is 18.