Common Multiples and Least Common Multiple

A multiple of a number is a product of a given whole number and another whole number. The first four multiples of 3 are 3, 6, 9, and 12.

A least common multiple (LCM) is the least number that is a common multiple of two or more numbers.

Find the least common multiple of 4 and 6.

- **4**  
  - **6**  
  - **XXX**  
  - **XXX**  
  - Are there the same number of X’s in each column? No. Since the 1st column has fewer, add another set of 4 X’s.

- **4**  
  - **6**  
  - **XXX**  
  - **XXX**  
  - **XXX**  
  - Are there the same number of X’s in each column? No. Since the 2nd column has fewer, add another set of 6 X’s.

- **4**  
  - **6**  
  - **XXX**  
  - **XXX**  
  - **XXX**  
  - Are there the same number of X’s in each column? No. Since the 1st column has fewer, add another set of 4 X’s.

- **4**  
  - **6**  
  - **XXX**  
  - **XXX**  
  - **XXX**  
  - Are there the same number of X’s in each column? Yes. Since the columns are equal, the number of X’s is the LCM. The LCM = 12.

Find the least common multiple of each number pair.

1. 2 and 3  
2. 6 and 9  
3. 5 and 6  
4. 8 and 3  
5. Can the LCM of 9 and 17 be less than 17? Explain.