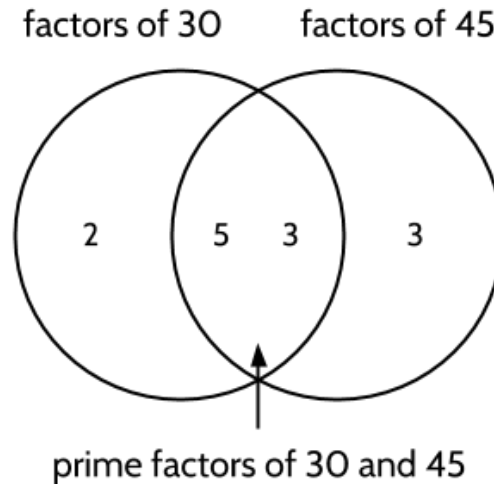


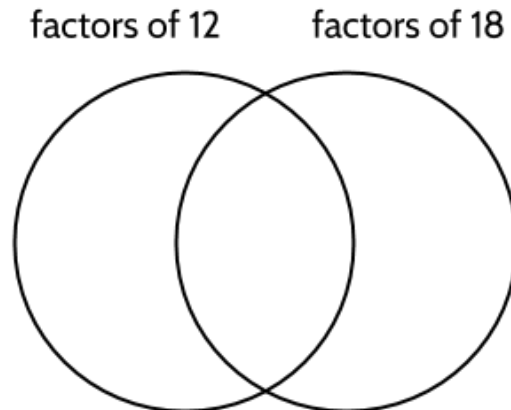
Greatest Common Factors and Least Common Multiples

A Venn diagram can be used to show the greatest common factor of two numbers.



The numbers in the left circle (2, 5, 3) are the prime factors of 30 and the numbers in the right circle (5, 3, 3) are the prime factors of 45. The numbers in the middle (5, 3) are the shared prime factors of 30 and 45. $5 \times 3 = 15$, so 15 is the greatest common factor of 30 and 45.

- 1) Use a Venn diagram to find the greatest common factor of 12 and 18.



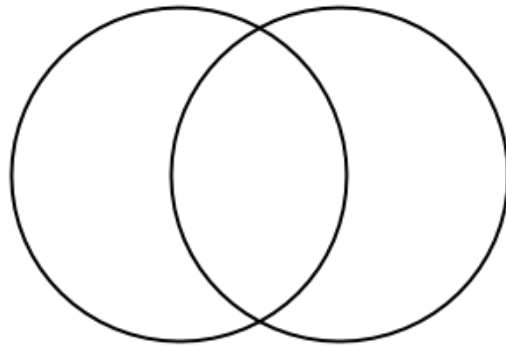
- 2) Use a Venn diagram to find the greatest common factor of 60 and 75.

- 3) How could you use the a Venn diagram to find the least common multiple of two numbers? (Take a look back at the previous diagrams.)

As a reminder, here is a different way to show the least common multiple of 30 and 45:

30, 60, **90**, 120, 150, ...

45, **90**, 135, 180, 215...



- 4) The greatest common factor of two numbers is 12 and the least common multiple of the same two numbers is 360. What are the two numbers?

Is there more than one solution?

Thank you to @benjamindickman for the idea.