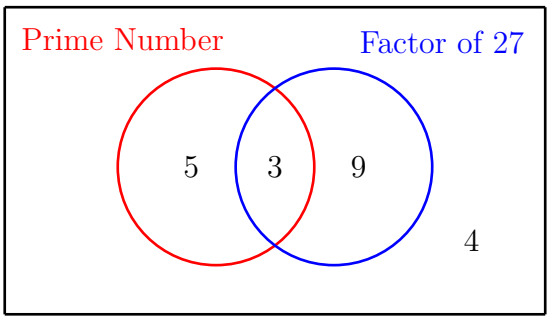
CEMC at Home

Grade 7/8 - Tuesday, May 26, 2020

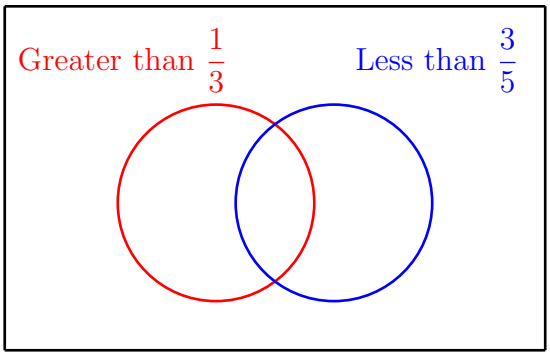
Going in Circles

In the Venn diagram shown, the circle on the left contains prime numbers and the circle on the right contains factors of 27. The overlapping area in the middle, contained in both circles, contains prime numbers that are factors of 27. The area outside both circles contains numbers that are neither prime nor factors of 27. We have placed one positive integer in each of the four regions, but they are not the only numbers we could have chosen.



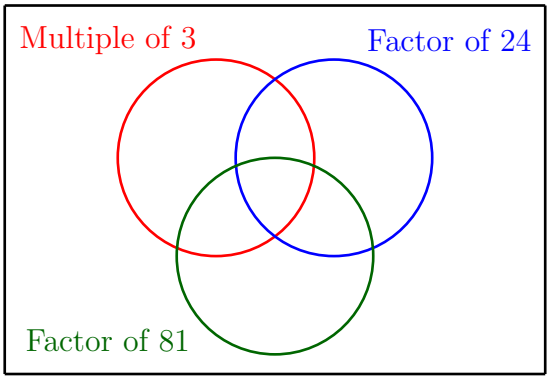
Problem 1

This Venn diagram has four regions. Place a fraction in as many of the regions as you can. Is it possible to find a fraction for each region?



Problem 2

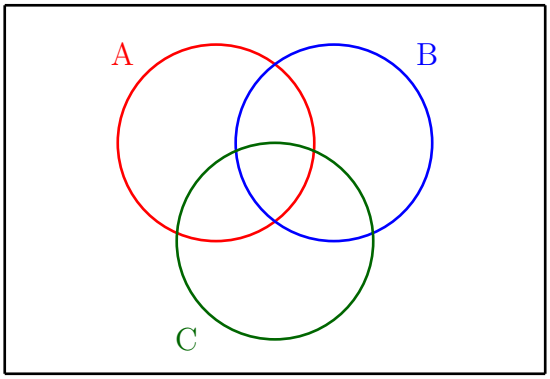
This Venn diagram has eight regions (seven regions "inside" at least one of the circles and one region "outside" all three circles). Place a positive integer in as many of the regions as you can. Is it possible to find a positive integer for each region?



Problem 3

This Venn diagram has eight regions. Place a positive three-digit integer in as many of the regions as you can. Is it possible to find a three-digit integer for each region?

A: 5 is a factor of the sum of the digits
B: The product of the digits is even
C: The mean of the digits is an integer



More Info:

Check the CEMC at Home webpage on Wednesday, May 27 for a solution to Going in Circles.