Using a Venn Diagram to Organize Survey Results

One hundred thirty TCC faculty members were surveyed regarding their plans to the upcoming weekend.

The results are as follows.

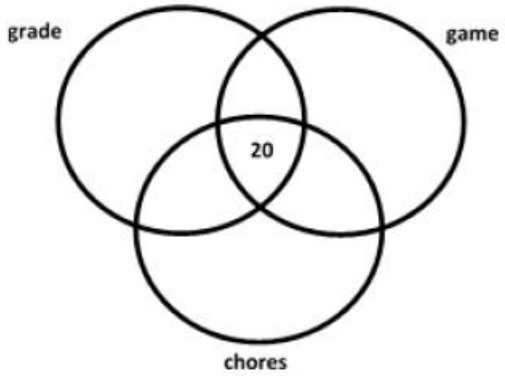
- 59 plan to grade papers
- 67 plan to attend a football game
- 86 plan to do household chores
- 30 plan to grade papers and attend a football game
- 32 plan to grade papers and do household chores
- 44 plan to attend a football game and do household chores
- 20 plan to grade papers, attend a football game, and do household chores

Draw a Venn diagrams

Draw 3 intersecting circles label each with an activity name.

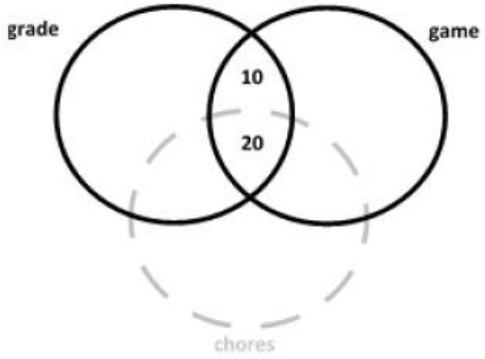
Always start where all three regions overlap

20 plan to grade papers, attend a football game, and do household chores. So write 20 in the center region where all three circles overlap



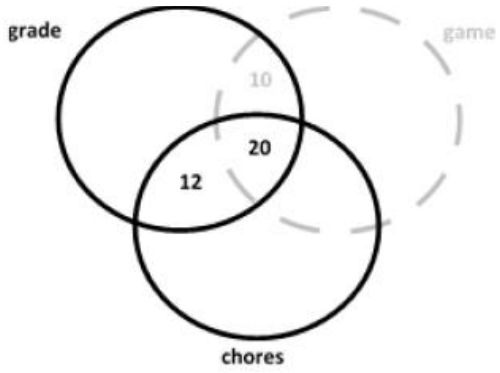
Number a region where two activities overlap

30 plan to grade papers and to attend a football game. The central and top central are where are grade and game overlap. The sum of those regions must be 30. So you write 10 in the top central region because 20 are already accounted for in the central region and 30 minus 20 is 10.



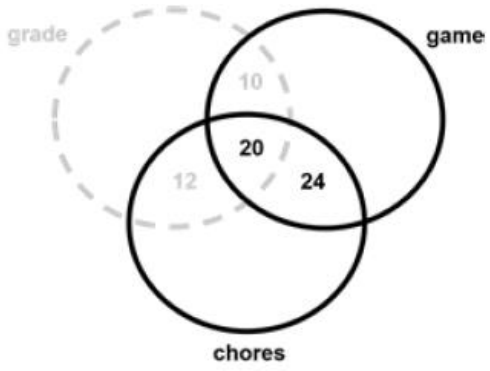
Number a region where two activities overlap

32 plan to grade papers and do household chores. The central and the left central region are where grade and chores overlap. The sum of those regions has to be 32, so you write a 12 in the left central region for 32 minus 20 equals 12.



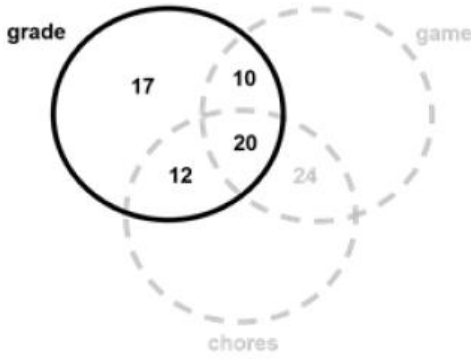
Number a region where two activities overlap.

44 plan to attend a football game and do household chores. The central and the right central regions are where game and chores overlap. The sum of those regions hast to be 44, so you write and 24 in the right central region for 44 minus 20 equals 24



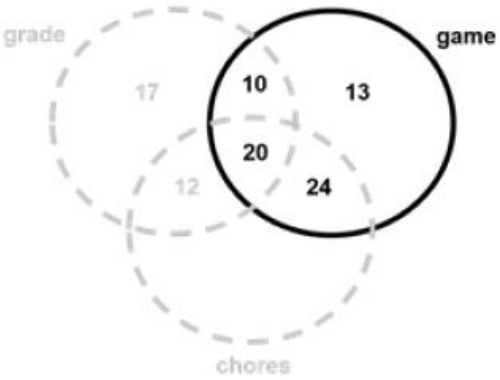
Number a region where exactly one activity is indicated

59 plan to grade papers. The top left region is where grade does not overlap another activity. The sum of the numbers in the regions contained in the grade circle has to add up to 59, so you place a 17 in the top left region of the grade circle 59 minus 10 minus 20 minus 12 equals 17.



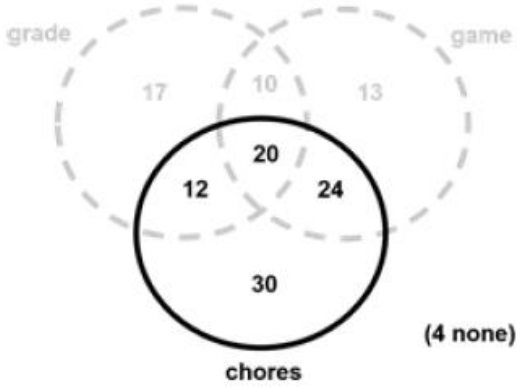
Number a region where exactly one activity is indicated

67 plan to attend a football game. The top right region is where game does not overlap any other circle. The sum of the numbers in the four regions inside the game circle has to add up to 67 so write a 13 in the top region of the game circle for 67 minus 10 minus 20 minus 24 equals 13



Number a region where exactly one activity is indicated

86 plan to do chores. The bottom region is where chores does not overlap another circle. The sum of the numbers in the four regions inside the chores circle must be 86, so you write a 30 in the bottom region for 86 minus 12 minus 20 minus 24 equals 30.



Number the region where no activity is indicated.

130 TCC faculty members were surveyed, so total all the numbers from inside the circles 17 plus 10 plus 13 plus 12 plus 20 plus 24 plus 30 equals 126. Take that total and subtract it from the total number of people of surveyed so 130 minus 126 equals 4 so write 4 outside of all the circles.