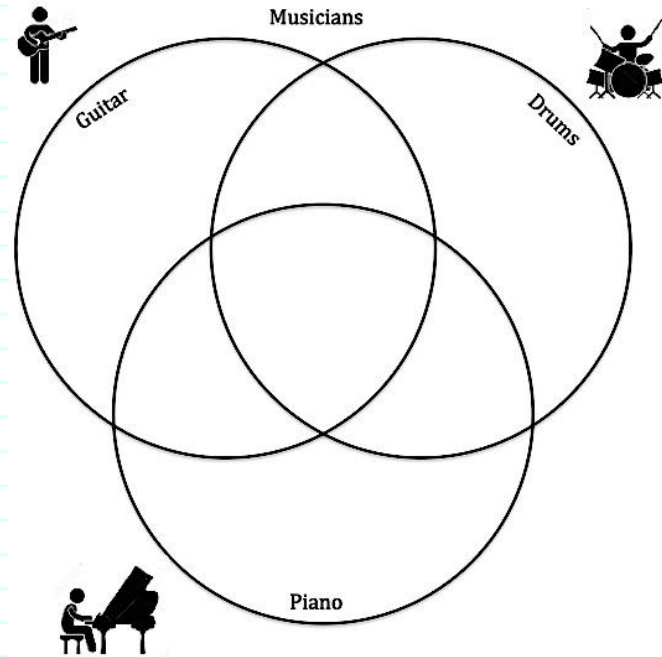


## Problem Solving: Venn Diagrams

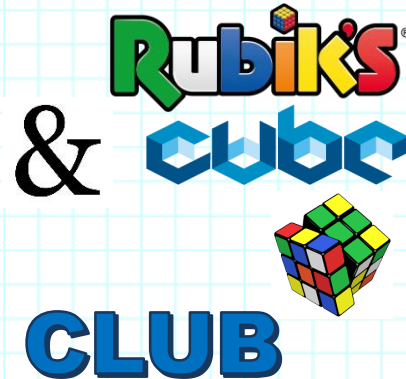
1)

- In a group of musicians, 12 can play only the guitar.
- Five musicians can play the guitar, drums, and piano.
- Three musicians can play both the guitar and piano but do not know how to play the drums.
- A total of 18 musicians play the piano – of those, 10 play more than one instrument.
- The number of musicians that play only the piano is the same as the number of musicians that play only the drums.
- Four musicians play both the drums and guitar, but not the piano.

How many musicians are there in the group?

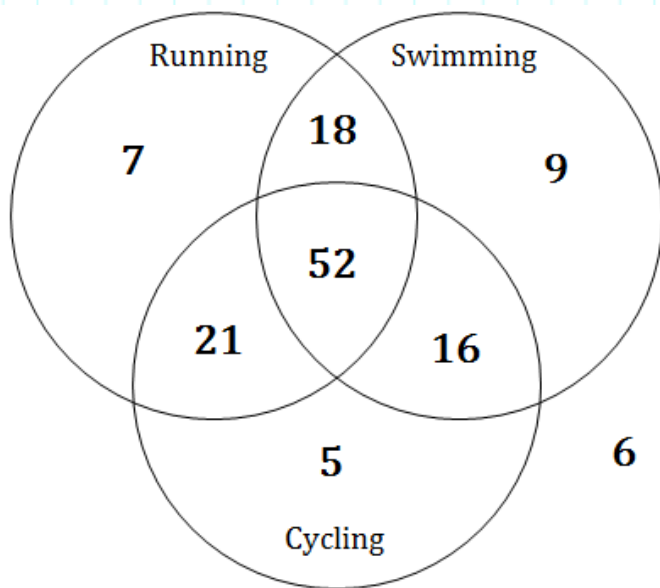


- 2) There are 75 students in the Yo-Yo and Rubik's cube club. 33 are practicing yo-yo tricks, 45 are working on Rubik's cube solutions, while 9 students just like to hang out and eat lunch outside and are not working on yo-yo tricks or cube solutions. How many members of the club are practicing yo-yo tricks, but not Rubik's cube solutions?



3) The Venn diagram below shows how many members of a triathlon training club participated in various forms of exercise last week.

- How many members went cycling?
- How many members went swimming?
- How many members participated in all 3 sports?
- How many members went running only?
- How many members went swimming only?
- How many members did not participate at all?
- How many members went running and cycling but not swimming?
- How many members went running and swimming but not cycling?
- How many members went swimming or cycling but not running?
- How many members are in the triathlon training club?



4) Of all the students at CSN, 80% have a pet and 40% play a sport. However, 10% of all the students at CSN neither own a pet nor play a sport. What percent of all students at CSN both own a pet and play a sport?

