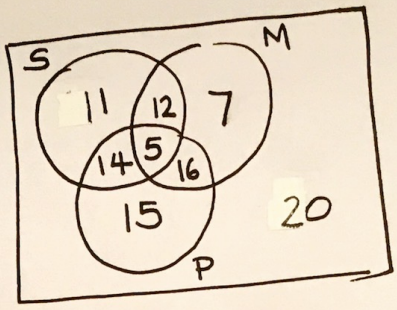
Three Set Practical Problems

In a group of 100 students, 42 study Statistics, 40 study Mathematics, and 50 study Physics. 21 study Mathematics and Physics, 19 study Statistics and Physics, 17 study Statistics and Mathematics and 5 study all three.

Draw a Venn diagram to represent this information.

(a) How many students study only **one** of these subjects?

(b) How many students study none of these subjects?



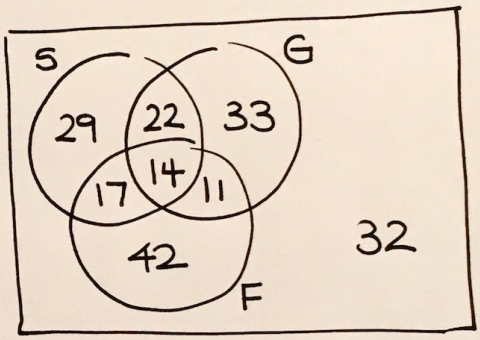
(a) $11+7+15=33$

(b) 20

A group of 200 adults were asked which types of magazines they read. Their replies showed that 82 read Sports magazines, 80 read Garden magazines, and 84 read Fashion magazines. 36 read Sports magazines and Garden magazines. 31 read Sports magazines and Fashion magazines. 25 read Garden magazines and Fashion magazines. 14 read all three magazines.

(a) How many adults read Sports and Garden magazines, but not Fashion magazines?

(b) How many adults reads exactly two of these types of magazine?



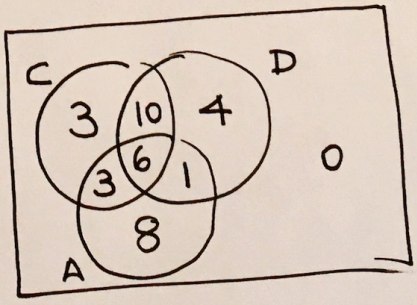
(a) 22

(b) $22+17+11=50$

There are 3 clubs - chess, drama and art. All the members of a group of 35 students belong to at least one club. 8 of the students belong to only art club. 6 of the students belong to all 3 clubs. 3 of the students belong to chess and art clubs but not to drama club. 18 of the students belong to art club. 3 of the students belong only to chess club. 4 of the students belong only to drama club.

(a) How many students belongs to chess club and to drama club but not to art club?

(b) How many students belong to chess club?



(a) 10

(b) 22