Part 1:

Given: U = {1, 2, 3, 4, 5, 6, 7, 8, 9}
A = {a|a is an even number}
B = {b|b is a prime number}
C = {c|c is a multiple of 6}

Find:

1) A' =
2) B' ∪ C =
3) C' ∩ A =
4) (A' ∩ B')' =
5) (C ∪ B)' ∩ A =

Part 2:

The Venn diagram shows the results of the survey of 25 players at a sports club who take part in various sporting activities where

A = {members who do archery}
B = {members who play badminton}
C = {members who take part in cross country}

Using the Venn Diagram, find the number of members who take part in:

a) cross country
b) cross country only
c) cross country and archery
d) cross country or badminton
e) cross country and badminton but do not like archery
f) cross country and archery only
g) cross country and badminton
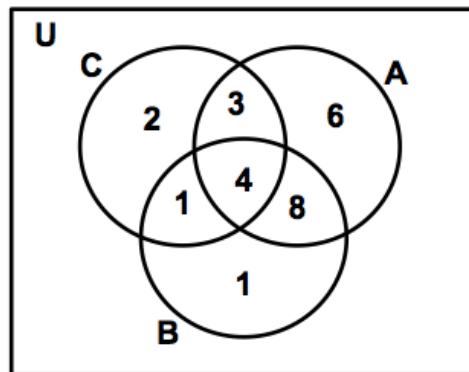
Part 3:

A survey of 80 sophomores at Xavier High School showed the following:
36 likes English   16 likes CLE and English
32 likes Science   16 likes Science and CLE
32 likes CLE   14 likes Science and English
6 likes all three

1) Construct a Venn Diagram to represent the given information.

2) Using the Venn Diagram that you constructed, answer the following questions:
    How many students:
        a) like English only?
        b) like none of the three subjects?
        c) likes CLE only?
        d) likes Science and CLE?
        e) likes Science or CLE?
        f) likes Science and CLE only?