ASSIGNMENT -1

Q.1: Let A = {2, 3, 5, 7, 11, 13} and B = {A, 2, 11, 18}.

a. Find A ∪ B. b. Find A ∩ B. c. Find A − B.

Q.2. There are 80 students in year 11. 9 students study French and German. 35 students only study French 2 students do not study French or German.

(a) Complete the Venn diagram .

(b) Work out how many students study only German.

Q.3 . At a wedding, the guests may have ice cream or custard with their dessert. The Venn diagram shows information about the choices the guests made.

(a) How many guests had custard?

(b) How many guests had ice cream and custard?

(c) How many guests went to the wedding?

Q.4. Given U = {1, 2, 3, 4, 5, 6, 7, 8, 9}, A = {2, 4, 6, 8}, B = {1, 3, 4, 5, 7} C = {7, 8} find:

a. A′ ∪ B′ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. A – B \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. (A ∩ C) ∩ (A ∪ B) \_\_\_\_.

Q.5. :Let U = {1, 2, 3, 4, 5, 6, 7, 8, 9}, A = {1, 2, 3, 4} and B = {2, 4, 6, 8}.

(i) Find A'

(ii) Find B'

Q.6. Prove : (AᴖB)’ = A’ ᴗ B’.