

Day: \_\_\_\_\_ Date: \_\_\_\_\_

Mathematics

Set Theory BJC pass questions

1.

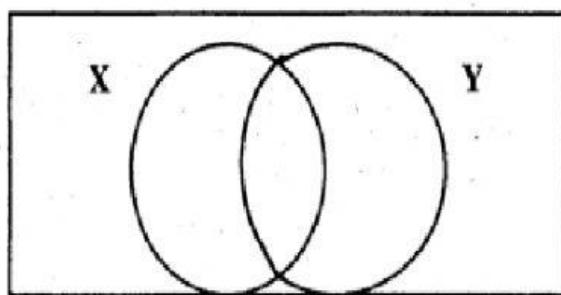
Place each element in the correct region in the Venn diagram below.

(a) 3 is in X but not in Y, [1]

(b) 1 is in Y but not in X, [1]

(c)  $4 \in X \cap Y$ , [1]

(d)  $2 \in (X \cup Y)^l$  [1]



2.

If  $A = \{2, 3, 4\}$  and  $B = \{3, 5, 7\}$  List the members of

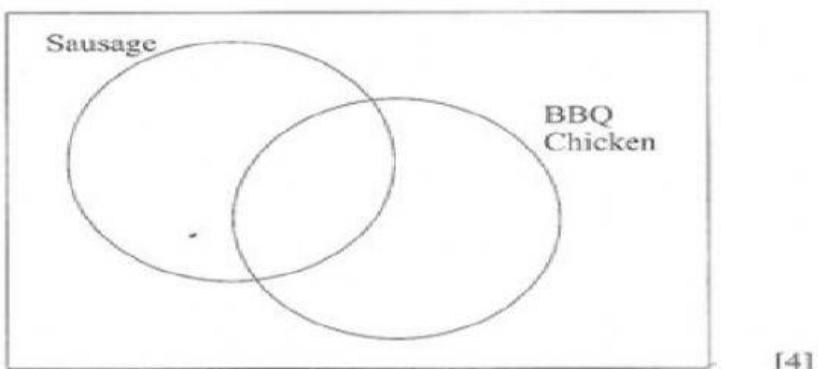
(i)  $A \cup B$  Answer: {\_\_\_\_\_}

(ii)  $A \cap B$  Answer: {\_\_\_\_\_}

(iii)  $n(A \cup B)$  Answer: {\_\_\_\_\_}

5 liked sausage, 6 liked BBQ chicken, 4 liked sausage and BBQ chicken. 3 liked neither.

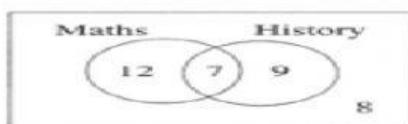
(i) Complete the Venn diagram to show this information.



(ii) Use the diagram to state how many friends were in this group.

4.

The Venn diagram below shows the results of a survey of a class.



(a) How many students are in the class?

Answer: \_\_\_\_\_ [1]

(b) How many students take neither History nor Maths?

Answer: \_\_\_\_\_ [1]

(c) How many students took both subjects?

Answer: \_\_\_\_\_ [1]

(d) How many students took Mathematics only?

Answer: \_\_\_\_\_ [1]

