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Class XI
25-08-21
REVISION on SETS
Good Morning!
ISWK SHARING KNOWLEDGE
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Sanjeet Das, HoD Mathematics

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25-08-21

Revision on Sets

Q.1.

$Z \cup Y$

a) {Bryan, Phillip, Perez}

b) {Sarah, Gabino, Ja-Leah, Billy, Phillip, Bryan, Perez, Gabriel, William}

c) {Brittney, Na'Quan, Bryan, Gabriel, William}

d) {Gabriel, William, Bryan, Phillip, Perez}

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Q.2.

$X \cap Y \cap Z$

a) {Phillip, Perez}

b) {Phillip}

c) {Billy, Phillip, Bryan, Perez}

d) {Billy, Perez, Bryan}

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Q.3. The number of subsets of a set containing n elements is

(i). n

(ii). $2^n - 1$

(iii). n^2

(iv). 2^n

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Q.4. Two finite sets have m and n elements. The number of subsets of the first sets is 112 more than that of the second. The values of m and n are respectively

(i). 4, 7

(ii). 7, 4

(iii). 4, 4

(iv). 7, 7

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Q.5. In a city 20% of the population travels by car, 50% travels by bus and 10% travels by both car and bus. Then, persons travelling by car or bus is

(i). 80%

(ii). 40%

(iii). 60%

(iv). 70%

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Q.6. If A and B are two sets such that n(A) = 70, n(B) = 60, $n(A \cup B) = 110$, then $n(A \cap B)$ is equal to

(i). 240

(ii). 50

(iii). 40

(iv). 20

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Q.7. If A and B are two disjoint sets, then $n(A \cup B)$ is equal to

(i). n(A) + n(B)

(ii). n(A) + n(B) – n $(A \cap B)$

(iii).n(A) + n(B) + n $(A \cap B)$

(iv). n(A) n(B)

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Q.8. In a group of 1000 people, there are 750 who can speak Hindi and 400 who can speak Malayalam. How many can speak Hindi Only? How many can speak Malayalam only?

(i). 600, 150

(ii). 250, 600

(iii). 150, 250

(iv). 600, 250

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Q.9. In set-builder method the null set is represented by

(i). { }

(ii). ∅

(iii). $\{x : x \neq x\}$

(iv). $\{x : x = x\}$

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Q. 10. Name the laws

(i). $A \cup \emptyset = A$ and $A \cap U = A$

[..... Laws]

(ii). $A \cup B = B \cup A$ and $A \cap B = B \cap A$

[..... Laws]

(iii). $(A \cup B) \cup C = A \cup (B \cup C)$ and $(A \cap B) \cap C = A \cap (B \cap C)$

[..... Laws]

(iv). $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$ and $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$

[..... Laws]

(v). $(A \cup B)' = A' \cap B'$ and $(A \cap B)' = A' \cup B'$

[..... Laws]

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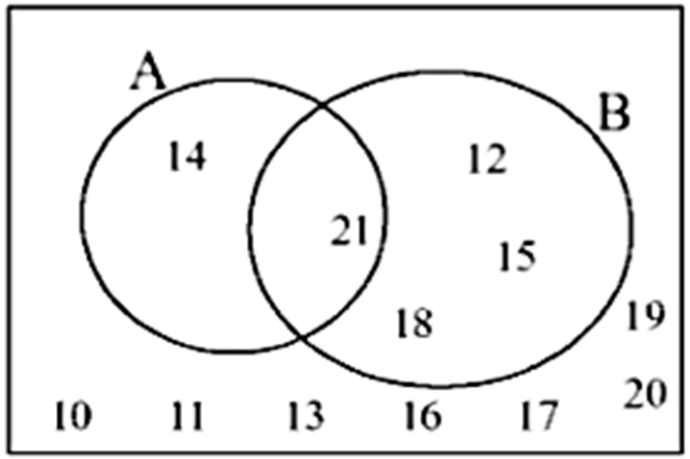
Q.11.



Which is the correct set notation for A U B?

a) {12, 14, 15, 18, 21}

b) {10, 11, 12, 14, 15, 18, 21}

c) {10, 11, 13, 16, 17, 19, 20}

d) {12, 14, 15}

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12 If A = {1,2,3}, B = {3,4,5}, C = {5,6,7}, find A U B U C.

a) {1,2,3,4,5,6,7}

b) {1,2,3,4,5,6,7,8}

c) {1,2,3,3,4,5,5,6,7}

d) {3,4,5}

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13 If A= {10,20,30,40},B={20,40,60} and C = {10,20,40,60,80}, find A ∩ B ∩ C

a) {20,40}

b) {20,40,60}

c) {10,20,30,40,50,60,80}

d) {10,20,30,...}

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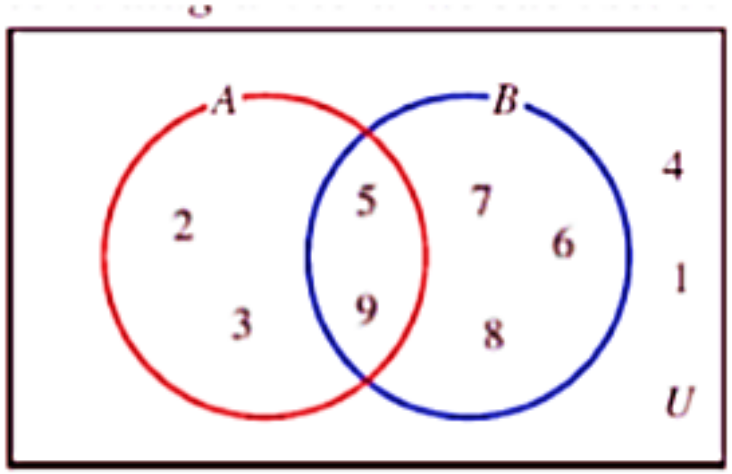

List the elements of A

a) {2,3}

b) {2,3,5,9}

c) {1,2,3,4,5}

d) {5,9}

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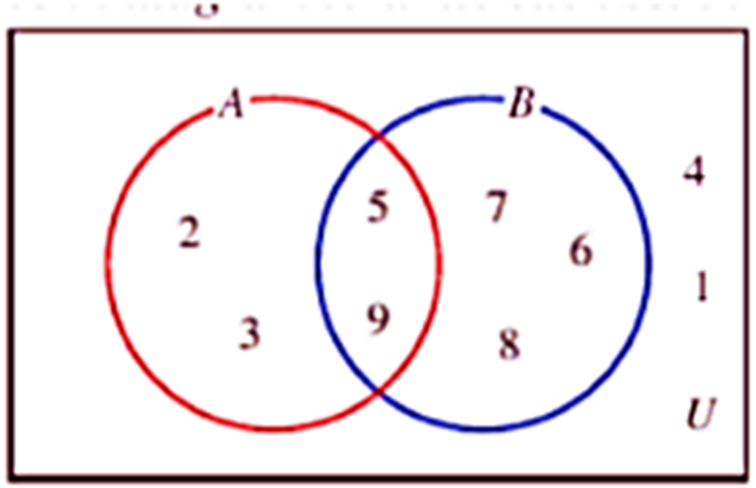

List the elements of A ∩ B

a) {5,9}

b) {2,3,7,6,8}

c) {2,3,5,9,7,6,8}

d) {1,4}

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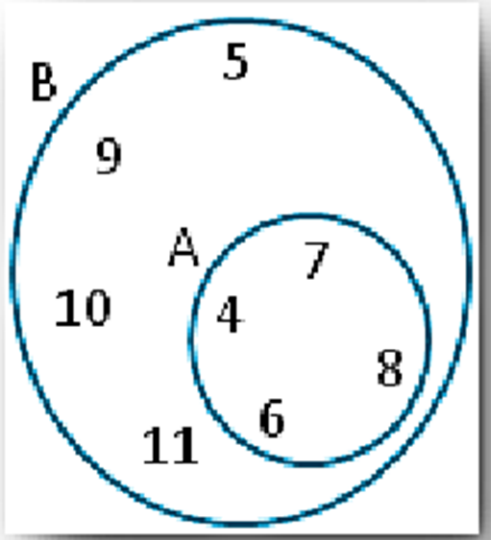

For the given sets A and B, which statement is true?

a) $A \subset B$

b) $B \subset A$

c) $A = B$

d) $A' = B$

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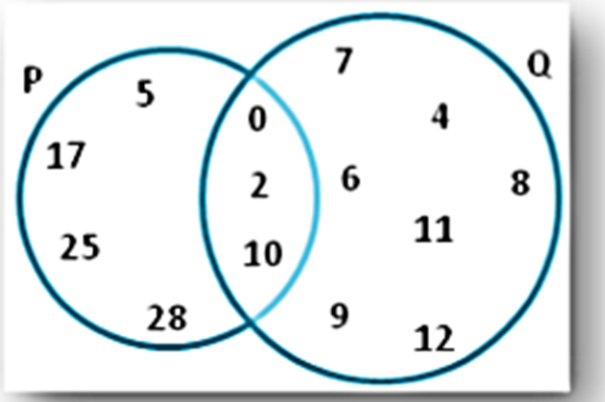

Use the Venn diagram to identify the statement that is true.

a) $2 \in P \cap Q$

b) $5 \in Q$

c) $\{5,7\} \subseteq P$

d) $P \cup Q = Q$

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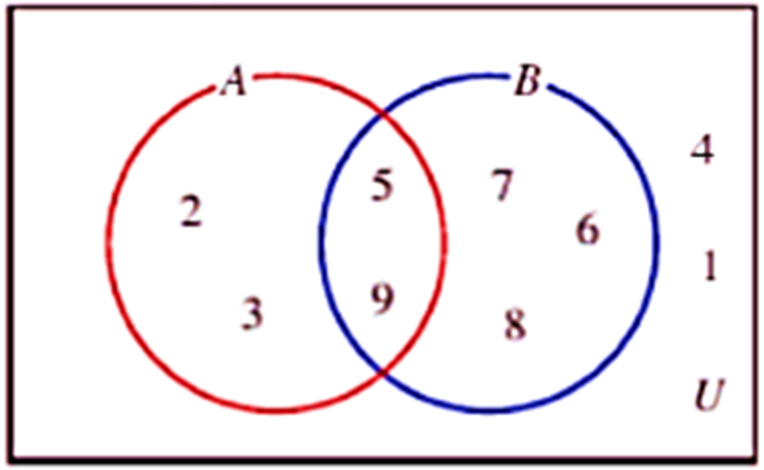

List the elements of (A U B)'

a) {1,4}

b) {2,3,5,6,7,8,9}

c) {2,3,6,7,8}

d) {5,9}

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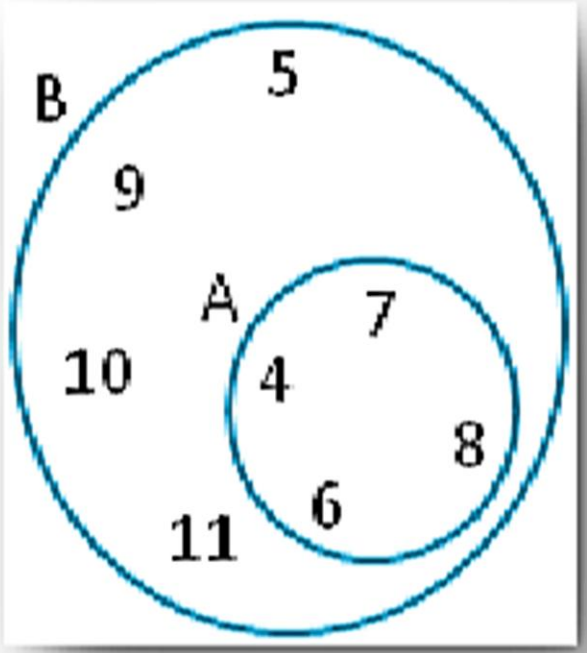
List the elements of B



a) {4,5,6,7,8,9,10,11}

b) {4,6,7,8}

c) {9,5,10,11}

d) {4,5,6,7,8,9,10}

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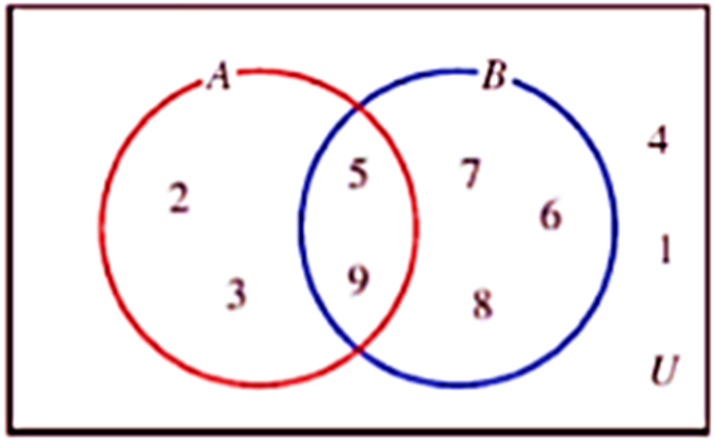

List the elements of $A \cap B'$

a) {2,3}

b) {5,9}

c) {2,3,6,7,8}

d) {1,2,3,4,5,6,7,8}

20 If U = {2,3,5,7,11,13} and C = {2,3,5}, find C'

a) {7,11,13}

b) {7,9,11,13}

c) {2,3,5}

d) U

Q.21.

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				1b	2b
3iv	4ii	5iii	6iv	7i	8iv
9iii	10a	11a	12a	13a	14b
15a	16a	17a	18a	19a	20a

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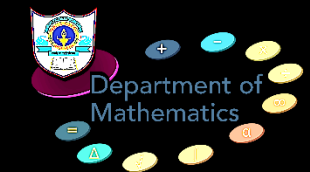

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Q.21.

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Out of 280 students in class XI of a school, 135 play Hockey, 110 play football, 80 play volleyball, 35 of these play hockey and football, 30 play volleyball and hockey, 20 play football and volleyball. Also, each students plays at least one of the three games. How many students play all the three games?

$$280 = 135 + 110 + 80 - 35 - 30 - 20 + n$$

$$n = 280 - 240 = 40$$

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JENNIFER | ISWK10:07 AM

(ON THE SPOT QUESTION)

In a class of 50 students, 10 did not opt for math, 15 did not opt for science and 2 did not opt for either. How many students of the class opted for both math and science,

a) 24 b) 25 c) 26 d) 27

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10:07 AM
In a class of 50 students, 10 did not opt for math, 15 did not opt for science and 2 did not opt for either. How many students of the class opted for both math and science, 24
25 26 27

Thank You!

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