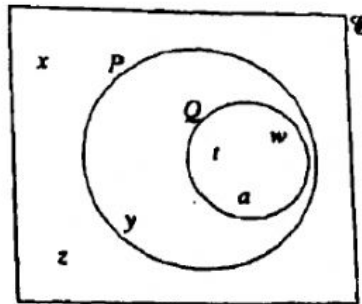


Write elements in alphabetical/numerical order with no spacing

10. The Venn diagram shows the sets P and Q contained in the universal set \mathcal{U} .



- (a) List the elements in the set

(i) $P \cup Q$. Answer: { _____ } [1]

(ii) $P \cap Q$. Answer: { _____ } [1]

(iii) Q' . Answer: { _____ } [1]

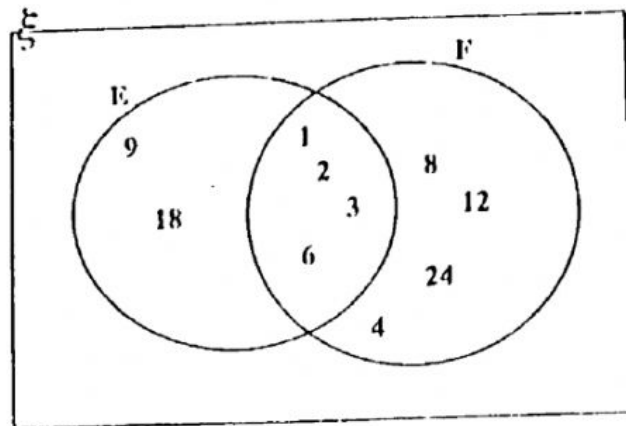
- (b) Write down the value of

(i) $n(P)$. Answer: _____ [1]

(ii) $n(P' \cap Q')$. Answer: _____ [1]

Write elements in alphabetical/numerical order with no spacing

11. The Venn diagram below shows the set of factors of 18 (E) and 24 (F). Use the diagram below to answer the questions.



List

- (a) (i) the members of E.

Answer: { _____ } [2]

- (ii) the members of F only.

Answer: { _____ } [2]

- (iii) the common factors of 18 and 24.

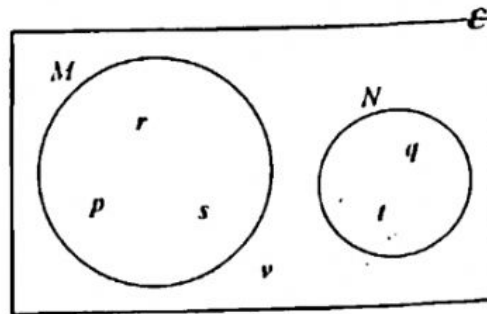
Answer: _____ [2]

- (b) Write down the HCF of 18 and 24.

Answer: _____ [1]

Write elements in alphabetical/numerical order with no spacing

The Venn diagram shows the sets M and N contained in the universal set E .



(a) List the elements in the set

(i) $M \cup N$,

Answer: _____ [1]

(ii) $M \cap N$,

Answer: _____ [1]

(iii) N' .

Answer: _____ [1]

(b) Write down the value of

(i) $n(M)$,

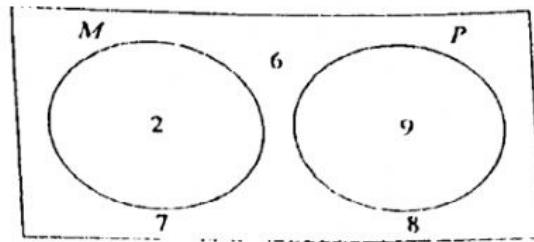
Answer: _____ [1]

(ii) $n(M' \cap N')$.

Answer: _____ [1]

Write elements in alphabetical/numerical order with no spacing

15. Use the Venn diagram below to answer the questions which follow.



List the member(s) of

- (i) M ,

Answer: {_____}

- (ii) P ,

Answer: {_____}

- (iii) $M \cup P$,

Answer: {_____}

- (iv) $M \cap P$,

Answer: {_____}

- (v) M^c ,

Answer: {_____}

- (vi) U .

Answer: {_____}

Write elements in alphabetical/numerical order with no spacing

19. $\mathcal{E} = \{2, 4, 6, 8, 10, 12, 14\}$
 $X = \{2, 4, 8, 10\}$
 $Y = \{6, 8, 14\}$

(a) Using the sets above, state whether each statement is true or false.

(i) $8 \notin Y$

Answer: _____ [1]

(ii) $\{4, 6\} \subseteq X$

Answer: _____ [1]

(b) List the members of

(i) $X \cup Y$

Answer: _____ [1]

(ii) Y'

Answer: _____ [2]

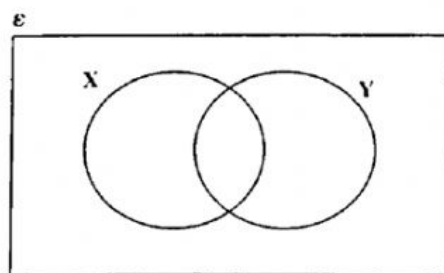
(iii) $n(X)'$

Answer: _____ [2]

(iv) $X \cap Y$

Answer: _____ [1]

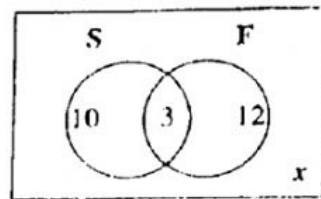
(c) Complete the Venn diagram, writing each member of X and Y in the correct region.



Answer: _____ [4]

Write elements in alphabetical/numerical order with no spacing

The Venn diagram represents 30 students of grade 9 who study Spanish (S) and French (F).



- (i) Calculate the value of x .

Answer: _____ [2]

- (ii) How many students study both Spanish and French?

Answer: _____ [1]

- (iii) How many students study Spanish?

Answer: _____ [2]