

Q.1 Draw appropriate Venn diagram for each of the following :

(a)  $(A \cup B)'$

(b)  $(B - A)'$

(c)  $A' - B'$

(d)  $(A \cap B \cap C)'$

(e)  $A' \cup B' \cup C'$

(e)  $(A \cap B)' \cup C' \cup (A \cup B)'$

Q.2 Taking the set of natural numbers as the Universal set, write down the complement of the following sets:

(a)  $\{x : x \text{ is a natural number divisible by 5 and 10}\}$

(b)  $\{x : x \in \mathbb{N} \text{ and } 4x + 3 < 15\}$

(c)  $\{x : x \in \mathbb{N} \text{ and number of digits in } x \text{ is greater than 2}\}$

Q.3 If  $x$  and  $Y$  are two sets such that  $X \cup Y$  has 50 elements,  $X$  has 28 elements and  $Y$  has 32 elements. How many elements does  $X \cap Y$  have ?

