National Institute of Open Schooling
Senior Secondary Course : Mathematics
Lesson 1: Sets
Worksheet - 1

1.	Write three different Sets in the roster method by taking different objects in your surroundings.
2.	Develop any three Sets in the Set builder form by using any type of numbers in the number system.
3.	If A = {1, 2, 3, 4, 5, 6, 7, 8} and B = {5, 6, 7}, Then find (i) A – B (ii) B – A., and check whether A – B is equal to A – B
4.	If A = {1, 3, 5, 7, 9} B = {5, 6, 7, 8} and C = {7, 8, 9} Then find (i) $A\cup(B\cup C)$, and (ii) $A\cap(B\cap C)$
5.	If $A=\{x:x\in z^{+}\ and\ x\le 6\}$ and $B=\{y:y \text{ is a prime number } <10\}$ Then find (i) $A\cup B$, and (ii) $A\cap B$
6.	Write down all the subjects of the following sets: (i) A = {a, b) and (ii) B = {1, 2, 3} Observe and establish any relationship between number of elements and number of subsets of a Set.
7	Cite an example of Set A and Set B, where Set A is subset of Set B. Draw Venn diagram for A – B and B – A, when Set A is subset of Set B ($A\subset B$).
8	If $\cup=\{1,2,3,4,5,6,7,8\}$ $A=\{1,3,5,7\}$ $B=\{2,4,6,8\}$, then verify that (i) $(A\cup B)'=A'\cap B'$

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	(ii) $(A \cap B)' = A' \cup B'$
9.	Let N be the universal set of natural numbers and A and B be its subsets given by $A = \{x : x \in N \text{ and } x \leq 10\}$ $B = \{x : x \in N \text{ and } x \text{ is a multiple of } 5\}$ Find the complements of Set A and B.
10.	Let $\cup = \{2,4,6,8,10,12,14,16\}$ $A = \{2,4,6,8\}$ $B = \{10,12,14,16\}$, then verify that (i) $(A)' = A$ (ii) $A \cap A' = Q$ (iii) $\left(B'\right)' = B$
11.	Differentiate between equal and equivalent set with examples.
12.	Find the power set of the following sets: (i) $A = \left\{x : x \in R \text{ and } x^2 + 5 = 0\right\}$ (ii) $B = \{y : y \in N \text{ and } 1 \leq y \leq 3\}$