

11/09/2017

## Sch [ ASSIGNMENT ]

- ① Date ..... Out of 500 car owners investigated Day .....  
400 owned Maruti Car and 200 owned  
Hyundai Car; 50 owned both cars.  
Is this data correct?
- ② A market research group conducted a survey of 2000 consumers and reported that 1720 consumers liked product  $P_1$  and 1450 consumers liked product  $P_2$ . What is the least number that must have liked both the products?
- ③ There are no students in a Chemistry class and 60 students in a physics class. Find the no. of Date ..... students which are either in Day .....  
Physics class or Chemistry class in the following cases:
- (i) the 2 classes meet at the same hour.
  - (ii) the 2 classes meet at different hours and 20 students are enrolled in both the subjects.
- ④ A college awarded 38 medals in football, 15 in Basketball & 20 in Cricket. If these medals went to a total of 58 men and only three men got medals in all the three sports; how many received medals in exactly two of the three sports?

Money can give you everything except happiness.

⑤ For sets A, B & C, using properties of sets, prove that:

Date ..... Day .....

(i)  $A - (B \cup C) = (A - B) \cap (A - C)$

(ii)  $A - (B \cap C) = (A - B) \cup (A - C)$

(iii)  $(A \cup B) - C = (A - C) \cup (B - C)$

⑥ For sets A, B & C, using properties of sets, prove that:-

(i)  $A - (B \cap C) = (A - B) \cup (A - C)$

(ii)  $A \cap (B - C) = (A \cap B) - (A \cap C)$

⑦ Using properties of sets, prove that:

(i)  $(A \cup B) - (A \cap B) = (A - B) \cup (B - A)$

(ii)  $(A \cap B) \cup (A - B) = A$

(iii)  $(A \cup B) - A = B - A$

⑧ State & prove "De-Morgan's law".

⑨ A survey shows that 76% of the Indians like oranges, whereas 62% like bananas, what percentage of the Indians like both oranges & bananas?

⑩ In a group of 1000 people, there are 750 who can speak Hindi and 400 who can speak Bengali. How many can speak Hindi only? How many can speak Bengali? How many can speak both Hindi & Bengali?