Let A,B,C be any three sets, then prove that-

 $AX(B \cap C) = (AXB) \cap (AXC)$

 $(x,y) \in Ax(B \cap C)$

 $x \in A$ and $(y \in (B \cap C))$

 $x \in A$ and $(y \in B$ and $y \in C)$

 $(x \in A \text{ and } y \in B) \text{ and } (x \in A \text{ and } y \in C)$

 $(x,y) \in (A \times B)$ and $(x,y) \in (A \times C)$ // by Cartesian Product.

 $(x,y) \in (AxB) \cap (AxC)$

Related posts:

- 1. SET
- 2. Mathematical induction
- 3. Relation
- 4. Net 34
- 5. Prove that-An(BuC) = (AnB) u (AnC)
- 6. prove that -(AnB)X(CnD) = (AXC)n(BXD)
- 7. Show that-(PnQ)X(RnS) = (PXR)n(QXS)
- 8. Binary operations
- 9. Algebraic structure
- 10. Group
- 11. Show that (..., -4, -3, -2, -1, 0, 1, 2, 3, 4,...) is group
- 12. Show that a*b=b*a
- 13. if a*c = c*a and b*c = c*b, then (a*b)*c = c*(a*b)
- 14. Undirected Graph and Incident Matrix

- 15. Prove the following by using the principle of mathematical induction for all $n \in \mathbb{N}$, $1^3 + 2^3 + 3^3 + ... + n^3 = [n (n + 1)/2]^2$
- 16. Prove that $G = \{-1,1,i,-i\}$ is a group under multiplication.
- 17. Hasse diagram for the "less than or equal to" relation on the set $S = \{0,1,2,3,4,5\}$