[redacted] Let A,B,C be any three sets, then prove that-
AX(B∩C) = (AXB) ∩ (AXC)

[redacted]
(x,y) ∈ Ax(B∩C)
x∈A and (y∈(B∩C))
x∈A and (y∈B and y∈C)
(x∈A and y∈B) and (x∈A and y∈C)
(x,y) ∈ (A x B) and (x,y) ∈(A x C) // by Cartesian Product.

(x,y) ∈ (AxB)∩(AxC)

Related Posts:

1. SET
2. Mathematical induction
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5. Prove that- A∩(B∪C) = (A∩B) ∪ (A∩C)
6. prove that – (A∩B)X(C∩D) = (AXC)∩(BXD)
7. Show that- (P∩Q)X(R∩S) = (PXR)∩(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 ∈ N, $1^3 + 2^3 + 3^3 + \ldots + n^3 = [n (n + 1)/2]^2$
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}