[redacted] Show that-

(P∩Q)X(R∩S) = (PXR)∩(QXS)

For some arbitrary sets P, Q, R and S

[redacted]

Consider(x,y)

(x,y)∈(P∩Q)X(R∩S)

x∈(P∩Q) ∧ y∈(R∩S)

(x∈P and x∈Q) ∧ (y∈R and y∈S)

(x∈P ∧ y∈R) and (x∈Q ∧ y∈S)

(x,y)∈(P∧R) and (x,y)∈Q∧S)

(x,y)∈((P∧R) and (Q∧S))

(x,y)∈((P×R) ∩ (Q×S))

(PXR)∩(QXS)

Related Posts:

1. SET
2. Mathematical induction
3. Relation
4. Net 34
5. prove that- AX(B∩C) = (AXB) ∩ (AXC)
6. Prove that- A∩(B∪C) = (A∩B) ∪ (A∩C)
7. prove that – (A∩B)X(C∩D) = (AXC)∩(BXD)
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 $n \in N$, $1^3 + 2^3 + 3^3 + \ldots + n^3 = [n (n + 1)/2]^2$
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}