

PROBLEMS FOR SOLUTION

P 136. Find a topological space X which is T_0 and such that Y' fails to be closed for at least one subset Y of X . (Here Y' denotes the set of all accumulation points of Y .)

P. A. Pittas, Dalhousie University

P 137. If X is a complete metric space and T is a contraction in X , then T has a unique fixed point. This fails to hold if T has only the property $d(Tx, Ty) < d(x, y)$.

K. L. Singh, Memorial University

P 138. Prove that the set S is finite if and only if there is a permutation π of S such that no proper non-empty subset S' has the property $\pi(S') \subseteq S'$.

J. Marica, University of Calgary

P 139. Prove $S(a, b) = (a-b)^{n-1} [aS(1, 0) - bS(0, -1)]$ where $S(a, b)$ = determinant of a matrix of order n in which each element is either a or b .

K. Schmidt, University of Manitoba

P 140. Every integral two by two matrix is a sum of three squares; and the number three is best possible.

I. Connell, McGill University