

P R O B L È M E S

P 629, R 1. The answer is no. The results of Comer, Olin and Pierce⁽¹⁾ yield examples of compact spaces X such that $X^2 \approx X^3$ and X non $\approx X^2$, where \approx denotes homeomorphism.

XIX.1, p. 181,

Letter of Jan Mycielski, September 1976.

⁽¹⁾ See P. Olin, *Free products of elementary types of BA's*, *Mathematica Scandinavica* 38 (1976), p. 5-23.

P 884, R 1. The problem has been solved. Berrondo has constructed⁽²⁾ an example of a non-algebraically closed field complete with respect to two independent valuations.

XXIX.1, p. 159.

⁽²⁾ F. Berrondo, *Un corps non algébriquement clos complet pour deux valuations indépendantes*, *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences, Séries A et B*, 282 (1976), p. 675-677.

P 949, R 1. The problem has been solved⁽³⁾.

XXXIII.2, p. 305.

⁽³⁾ M. Kanter, *Completion measurable linear functionals on a probability space*, this fascicule, p. 277-304; see Theorem 3.1.

P 956 et P 957, R 1. The answer to both problems is negative⁽⁴⁾.

XXXIV.1, p. 144.

⁽⁴⁾ T. Maćkowiak, *Some examples of irreducibly confluent mappings*, this fascicule, p. 193-196.

R. FRANKIEWICZ (KATOWICE)

P 1021. Formulé dans la communication *Assertion Q distinguishes topologically ω^* and m^* when m regular and $m > \omega$* .

Ce fascicule, p. 175.

L. D. LOVELAND AND J. E. VALENTINE (LOGAN, UTAH)

P 1022. Formulé dans la communication *Generalized midset properties characterize geodesic circles and intervals.*

Ce fascicule, p. 240

ZBIGNIEW GRANDE (ELBLĄG)

P 1023. Formulé dans la communication *Sur les suites de fonctions approximativement continues et continues presque partout.*

Ce fascicule, p. 262

Z. JUREK AND K. URBANIK (WROCLAW)

P 1024. Formulé dans la communication *Remarks on stable measures on Banach spaces.*

Ce fascicule, p. 275.

W. WIĘSŁAW (WROCLAW)

P 1025. Can a non-algebraically closed metrizable field be complete with respect to two inequivalent locally bounded metrizable field topologies, i.e. can Schmidt's result⁽⁵⁾ be extended from norms to pseudo-norms? It cannot if norms are replaced by arbitrary minimal topologies (see P 884, R 1 above), but it remains valid for maximally complete valuations. In fact, Vámos has proved⁽⁶⁾ that for a field K the following conditions are equivalent:

- (i) K is algebraically closed and $\text{card}(K) = \text{card}(K)^{\aleph_0}$;
- (ii) K is maximally complete with respect to two independent valuations;
- (iii) there exist independent valuations v_1 and v_2 such that v_1 is maximal on K and K_{v_2} is Henselian.

⁽⁵⁾ F. K. Schmidt, *Mehrfach perfekte Körper*, *Mathematische Annalen* 108 (1933), p. 287-302. Compare also W. Więśław, *On topological fields*, this journal 29 (1974), p. 119-146, especially p. 123.

⁽⁶⁾ P. Vámos, *Multiply maximally complete fields*, *Journal of the London Mathematical Society* 12 (1975), p. 103-111.
