COLLOQUIUM MATHEMATICUM

VOL. XXII 1971 FASC. 2

P R O B L È M E S

P 446, R 1. As Jan Mycielski and Robert Solovay have informed us, the answer is yes. If II has a winning strategy, the set is countable.

Letter of February 1970.

P 461, R 2. If a measurable cardinal does not exist, the answer is negative (1). If it does, the answer is positive (2).

XIV, p. 148, et XIX. 1, p. 179.

(1) W. A. J. Luxemburg, *On the existence of σ-complete prime ideals in Boolean algebras*, Colloquium Mathematicum 19 (1968), p. 57.

(2) Karel Prikry, *On σ-complete prime ideals in Boolean algebras*, this fascicle, p. 209-214.

P 469, R 1. As A. Lelek has informed us, Calvin F. K. Jung obtained a positive answer in a particular case, and a complete positive solution has been given by Togo Nishiura. Both solutions are to appear in this journal.

XII. 2, p. 226 Letter of September 24, 1970.

P 560, R 1. The author of the problem, L. E. Ward, has sent us the following information:

The problem has been solved in the negative by William Lopez who showed (3) that there exist two finite polyhedra with the fixed point property whose union along an edge fails to have the fixed point property. Another example is due to R. H. Bing who exhibited (4) a one-dimensional

(3) William Lopez, *An example in the fixed point theory of polyhedra*, Bulletin of the American Mathematical Society 73 (1967), p. 922–924.

(4) R. H. Bing, *The elusive fixed point property*, American Mathematical Monthly 76 (1969), p. 119–132.

continuum X with the fixed point property and a two-cell D such that $X \cap D$ is an arc and $X \cup D$ does not have the fixed point property.

XV. 2, p. 251 Letter of December 3, 1969.

P 614, R 1. The answer is positive (5).

XVII. 2, p. 316.

(5) K. Kuperberg and W. Kuperberg, *On weakly zero-dimensional mappings*, this fascicle, p. 245-248.

P 672, R 1. L'auteur annonce une réponse affirmative.

XX. 2, p. 253.

J. ANUSIAK AND B. WĘGLORZ (WROCŁAW)

P 701 et **702.** Formulés dans la communication *Remarks on C-independence in Cartesian products of abstract algebras.*

Ce fascicule, p. 164.

MILAN SEKANINA (BRNO)

P 703. Formulé dans la communication *Number of polynomials in ordered algebras.*

Ce fascicule, p. 192.

STANLEY BURRIS (WATERLOO, CANADA)

P 704 et **705.** Formulés dans la communication *A note on varieties of unary algebras.*

Ce fascicule, p. 196.

W. A. KIRK (IOWA CITY, IOWA)

P 706. Formulé dans la communication *On conditions under which local isometries are motions.*

Ce fascicule, p. 231.

F. B. JONES (RIVERSIDE, CALIFORNIA) AND A. H. STONE (ROCHESTER, N. Y.)

P 707 et **708.** Formulés dans la communication *Countable locally connected Urysohn spaces.*

Ce fascicule, p. 242 et 243.

EULINE GREEN (COLUMBIA, MONTANA)

P 709. Formulé dans la communication *Completeness of L^p-spaces over finitely additive set functions.*

Ce fascicule, p. 260.

S. HARTMAN ET C. RYLL-NARDZEWSKI (WROCŁAW)

P 710-712. Formulés dans la communication *Quelques résultats et problèmes en algèbre des mesures continues.*

Ce fascicule, p. 275 et 276.

P 711, R 1. La réponse à la deuxième question est négative (6).

XXII. 2, p. 271.

(6) R. Kaufman, *Remark on Fourier-Stieltjes transforms of continuous measures,* ce fascicule, p. 279-280.

R. H. DYER AND D. E. EDMUNDS (SUSSEX)

P 713. Formulé dans la communication *Some remarks on variants of the Navier-Stokes equations.*

Ce fascicule, p. 315.

ROBERT R. PHELPS (STEATTLE, WASHINGTON)

P 714. Let X be a Banach space for which X^* is norm separable. Bessaga and Pełczyński have proved (7) the following Krein-Milman-type theorem: If C is a bounded norm closed convex subset of X^*, then C is the norm closed convex hull of its extreme points. Decide whether the following Choquet-type theorem is valid for these sets:

(7) C. Bessaga and A. Pełczyński, *On extreme points in separable conjugate spaces,* Israel Journal of Mathematics 4 (1966), p. 262–264.

For each x^* in C there exists a Borel probability measure μ on the set of extreme points of C such that

$$\langle x^*, x\rangle = \int_{y\in \operatorname{ext} C} \langle y^*, x\rangle d\mu(y^*) \quad \text{for each } x\in X.$$

It is known (8) that ext C is Carathéodory-mesurable with respect to each Borel probability measure on C. For other partial results cf. Bourgin (8) and S. Khurana (9).

Wrocław, 10. XII. 1969.

(8) R. Bourgin, *Barycentres of measures on certain non-compact convex sets*, Thesis, University of Washington, 1969.

(9) S. Khurana, *Measures and barycentres of measures on convex sets in locally convex spaces,* Journal of Mathematical Analysis and Applications 27 (1969), p. 103–115, and 28 (1969), p. 222–229.