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P R O B L È M E S

P 961 et **P 962, R 1.** The first of these problems has been solved in the negative (1). An essential result concerning the second is stated at the same place.

XXXIV.2, p. 295.

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(1) J. E. Valentine and S. G. Wayment, *A local metric characterization of Banach spaces*, this fascicle, p. 301-307.

P 988, R 2. The announced solution appeared in this fascicle (2).

XXXVI.1, p. 163, et XLIII.2, p. 386.

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(2) J. L. Gross and R. H. Rosen, *A combinatorial characterization of planar 2-complexes*, p. 241-247.

TEODOR C. PRZYMUSIŃSKI (WARSZAWA)

P 1203 et **P 1204.** Formulés dans la communication *On Martin's Axiom and perfect spaces.*

Ce fascicule, p. 211 et 213.

R. LEVY AND M. D. RICE (FAIRFAX, VIRGINIA)

P 1205 - P 1208. Formulés dans la communication *Normal P-spaces and the G_δ-topology.*

Ce fascicule, p. 239.

JONATHAN L. GROSS (NEW YORK, NY) AND RONALD H. ROSEN (ANN ARBOR, MICHIGAN)

P 1209. Formulé dans la communication *A combinatorial characterization of planar 2-complexes.*

Ce fascicule, p. 246.

DAVID D. BLEECKER (HONOLULU)

P 1210. Formulé dans la communication *Cut loci of closed surfaces without conjugate points.*

Ce fascicule, p. 276.

H. DELANGE (ORSAY)

P 1211. Let $\omega(n)$ be the number of distinct prime divisors of n. Is it true that, for every pair (q, q') of integers greater than or equal to 2 and every pair (r, r') of integers, as x tends to infinity one has

$$\#\{n \leqslant x \mid \omega(n) \equiv r \pmod{q} \text{ and } \omega(n+1) \equiv r' \pmod{q'}\} \sim \frac{x}{qq'}?$$

New Scottish Book, Probl. 954, 15. 5. 1979.

P 1212. Let f be a real-valued additive arithmetical function. Find necessary and sufficient conditions (on the values of f on prime powers) for the following property:

For all real numbers a and b, with $a < b$,

$$\lim_{x\to\infty} \frac{1}{x} \#\{n \leqslant x \mid a \leqslant f(n) \leqslant b\} = 0.$$

If f is supposed to be non-negative, then the answer is $\sum f^*(p)/p = \infty$, where $f^*(p) = \inf(f(p), 1)$.

New Scottish Book, Probl. 955, 15. 5. 1979.

P 1213. Let f be an additive function. It has been proved by Elliot ([1]) that if $f(p+1) = 0$ for every prime p, then $f(n) = 0$ for every n. Is it true that if $f(p+1) \in \mathbf{Z}$ for every p, then $f(n) \in \mathbf{Z}$ for every n?

New Scottish Book, Probl. 956, 15. 5. 1979.

([1]) P. D. T. A. Elliot, *A conjecture of Kátai*, Acta Arithmetica 26 (1974), p. 11-20.

L. VERSTRAELEN (LEUVEN)

P 1214. It is well known that in a conformally flat space a hypersurface is conformally flat if and only if it is quasiumbilical. Can conformally flat spaces be characterized among Riemannian manifolds as those for which conformal flatness and quasiumbilicity for hypersurfaces are equivalent?

New Scottish Book, Probl. 959, 27. 7. 1979.

F. RICCI (PISA)

P 1215. Let E be a closed subset of $\boldsymbol{T}$ such that every absolutely continuous function on E is in $A(E)$ (examples of countable sets of this type have been already given).

(a) Does E have necessarily measure zero?

(b) Are there perfect sets satisfying this property which are not Helson sets?

New Scottish Book, Probl. 960, 27. 10. 1979.

P 1216. Given two pseudomeasures T and V on $\boldsymbol{T}$ such that $\hat{T}(0) = \hat{V}(0) = 0$, consider the distributional derivative $(P_T P_V)'$ of the pointwise product $P_T P_V$, where P_T and P_V are primitives of T and V, respectively. In general, $(P_T P_V)'$ is not a pseudomeasure. This product has been introduced by J. Benedette.

(a) Are there closed subsets E of $\boldsymbol{T}$ which are not sets of strong spectral resolution and are such that if T and V above have support in E, then $(P_T P_V)'$ is a pseudomeasure?

(b) Let $E = \{0\} \cup \{1/2^m + 1/2^n \mid m, n \geqslant 0\}$. What is the answer to the first question in this case? (If $V \in M(E)$, then $(P_T P_V)' \in A'(E)$.)

New Scottish Book, Probl. 961, 27. 10. 1979.

S. MANHART (SANY)

P 1217 (Q). Consider a random walk of extreme element $H_{\text{int}} = H(t)$ of the solid category $\mathscr{S}$. The process develops within a rectilinear 3-cell N whose boundary ∂N is connected and closed. Estimate the expectation of $\tau_e = \inf\{t > 0\colon H(t) \notin N\}$.

Letter of January 4, 1982.

P 1217 (Q), R 1. In the Manhart Case, τ_e turned out to be equal to 2^5+1 (Letter of February 6, 1982). In other cases the problem is still open.