

of an  $n$ -cell,  $c$ , and an arc,  $a$ , such that  $c \cdot a$  is a point which is an end point of  $a$  and an interior point of  $c$ . A  $T_1$ -set is a simple triod. In this note it is proved that Euclidean  $n$ -space does not contain uncountably many mutually exclusive  $T_{n-1}$ -sets. For  $n=2$ , this is a theorem due to Moore (Proc. Nat. Acad. Sci. U.S.A. vol. 14 (1928) pp. 85-88). (Received March 27, 1944.)

170. G. S. Young: *Concerning spaces in which every arc has two sides.*

Let  $S$  denote a connected, locally connected, complete metric space satisfying the following axiom: If  $AB$  is an arc and  $D$  is a domain containing  $AB - (A+B)$ , then  $D$  contains a connected domain which is separated by  $AB - (A+B)$  into two connected domains, each having  $AB$  in its boundary. In this paper it is shown that if  $S$  is locally compact, it is a 2-manifold without boundary, which is closed if  $S$  is compact, and that if  $S$  is not locally compact, but satisfies certain "flatness" conditions, then it can be imbedded in a 2-manifold. A similar characterization and imbedding theorem is given for 2-manifolds with boundary. Several characterizations of the sphere are also given. (Received March 27, 1944.)

171. G. S. Young: *On continua whose links are non-intersecting.*

In this note, it is shown that if a compact metric continuum is not a simple link of itself and no two of its links intersect, then uncountably many are degenerate; also that the statement obtained by replacing the words "compact metric continuum" by "connected, locally connected, separable Moore space" is true. (Received March 27, 1944.)

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## NEW PUBLICATIONS

DAUS, P. H., GLEASON, J. M., and WHYBURN, W. M. Basic mathematics for war and industry. New York, Macmillan, 1944. 11+277 pp. \$2.00.

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GLEASON, J. M. See DAUS, P. H.

HARDY, G. H., and ROGOSINSKI, W. W. Fourier series. (Cambridge Tracts in Mathematics and Mathematical Physics, no. 38.) Cambridge University Press; New York, Macmillan, 1944. 100 pp. 8s 6d.

HICKSON, A. O. See PATTERSON, K. B.

HYATT, D., and DODSON, B. M. Mathematics for navigators. New York and London, McGraw-Hill, 1944. 7+106 pp. \$1.25.

Method-pamphlets on the Milne method of numerical integration of first-order differential equations and of certain equations of second order. Oakland, Calif., Marchant Calculating Machine Company. 4 pamphlets: MM-216, MM-216A, MM-260, MM-261. No charge.

NORTHROP, E. P. Riddles in mathematics. A book of paradoxes. New York, Van Nostrand, 1944. 8+262 pp. \$3.00.

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ROGOSINSKI, W. W. See HARDY, G. H.

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