	27	14	1	10	9	23	5	19	18
(2)	13	3	26	8	22	12	21	17	4
	2	25	15	24	11	7	16	6	20
	27	14	1	10	9	23	5	19	18
(3)	11	7	24	6	20	16	25	15	2
	4	21	17	26	13	3	12	8	22
	27	13	2	10	8	24	5	21	16
(4)	11	9	22	6	19	17	25	14	3
	4	20	18	26	15	1	12	7	23

Each of these normalized cubes represents a group of 1296, so that there are altogether 5,184 magic cubes of order 3.

THE UNIVERSITY OF CALIFORNIA

EXTENSION OF RANGE OF FUNCTIONS*

BY E. J. McSHANE

A well known and important theorem of analysis states that a function $f(x)$ which is continuous on a bounded closed set E can be extended to the entire space, preserving its continuity. Let us consider a metric space S and a function $f(x)$ defined and possessing a property P on a subset E of S. We shall for the sake of brevity say that *$f(x)$ can be extended to S preserving property P*, if there exists a function $\phi(x)$, defined and possessing property P on all of S, which is equal to $f(x)$ for all x on E. Our present object is to establish an easily proved theorem which both includes the classical theorem stated above, and also shows that functions satisfying a Lipschitz or Hölder condition on an arbitrary set E can be extended to S preserving the Lipschitz or Hölder condition. An advantage of the present procedure is that it yields an explicit formula for the extension.†

* Presented to the Society, June 20, 1934.

† After this paper was submitted for publication, the author found that Hassler Whitney had already indicated a simple proof that a function continuous on a bounded closed set can be extended to be continuous on all space, the method of extension being almost identical with the present one. (H. Whitney, Transactions of this Society, vol. 36 (1934), footnote on p. 63).