

2. F. P. Ramsey, *On a problem of formal logic*, Proc. London Math. Soc. (2) 30 (1930), 264-286.

DARTMOUTH COLLEGE

**COUNTEREXAMPLE TO EULER'S CONJECTURE
ON SUMS OF LIKE POWERS**

BY L. J. LANDER AND T. R. PARKIN

Communicated by J. D. Swift, June 27, 1966

A direct search on the CDC 6600 yielded

$$27^5 + 84^5 + 110^5 + 133^5 = 144^5$$

as the smallest instance in which four fifth powers sum to a fifth power. This is a counterexample to a conjecture by Euler [1] that at least n n th powers are required to sum to an n th power, $n > 2$.

REFERENCE

1. L. E. Dickson, *History of the theory of numbers*, Vol. 2, Chelsea, New York, 1952, p. 648.