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William L. Cocke* (cocke@math.wisc.edu), Univ of Wisconsin, Madison, Dept of Math, 480 Lincoln Dr, Madison, WI 53706-1388, and **I. Marty Isaacs** and **D. Skabelund**. *On the number of elements that are not k -th powers in a group.*

Let k be a positive integer, and suppose that the number of elements of a group G that are not k th powers in G is nonzero but finite. If G is finite, we obtain an upper bound on $|G|$, and we present some conditions sufficient to guarantee that G actually is finite. (Received September 11, 2015)