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Exponentiation of infinite cardinals. (Spanish. English, Spanish summaries)
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This expository paper is an introduction to the problem of cardinal exponentiation and the role played by the Singular Cardinal Hypothesis in its study. Intended for readers with a basic knowledge of set theory, the paper presents a considerable number of results and could serve as a motivating guide for the study of the contemporary theory of cardinal exponentiation.

The paper begins by introducing the Continuum Hypothesis and the Generalized Continuum Hypothesis and the general problem of cardinal exponentiation; it continues by stating, without proofs, a list of results, old and new, about cardinal exponentiation. To make the statements intelligible, the author explains some facts about large cardinals and elementary embeddings, including, for example, Scott's result that the existence of a measurable cardinal implies $V \neq L$. The results of Solovay and Easton regarding possible failures of the GCH are presented (after a brief description of the method of forcing) and then the Singular Cardinal Hypothesis (SCH) is stated. The author then indicates how, under the SCH, cardinal exponentiation is determined by the behavior of the function $\kappa \mapsto 2^\kappa$ on regular cardinals and the function $\mu \mapsto \operatorname{cf} \mu$. The account of the development of the topic continues with Jensen's covering lemma and its relationship to SCH; Shelah's pcf theory of possible cofinalities and some of its interesting aplications to cardinal exponentiation; and the Dodd-Jensen and Mitchell-Steel core models and subsequent results by Martin, Koepke, Gitik, Woodin and others, which establish the consistency of some large cardinal hypothesis from failures of the SCH. The final section includes additional results obtained by forcing over models with large cardinals.

Reviewed by *Carlos A. Di Prisco*