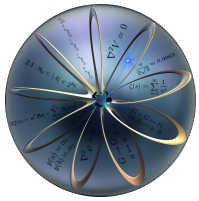

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Cantor's theorem

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Let X be any set and $\mathcal{P}(X)$ its power set. Then there is no bijection between X and $\mathcal{P}(X)$. Moreover, the cardinality of $\mathcal{P}(X)$ is strictly greater than that of X; that is, $|X| < |\mathcal{P}(X)|$.