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*On powers of Lindelöf spaces*

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**Abstract:** We present a forcing construction of a Hausdorff zero-dimensional Lindelöf space  $X$  whose square  $X^2$  is again Lindelöf but its cube  $X^3$  has a closed discrete subspace of size  $\mathfrak{c}^+$ , hence the Lindelöf degree  $L(X^3) = \mathfrak{c}^+$ . In our model the Continuum Hypothesis holds true.

After that we give a description of a forcing notion to get a space  $X$  such that  $L(X^n) = \aleph_0$  for all positive integers  $n$ , but  $L(X^{\aleph_0}) = \mathfrak{c}^+ = \aleph_2$ .

**Keywords:** forcing, topology, products, Lindelöf

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