

# Spectral results on toric manifolds

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## Abstract

How many two dimensional convex polytopes are there with given side length and side direction? We will show that this simple question encapsulates some interesting geometry and is related to the following question: "Does the spectrum of the Laplacian on a toric manifold determine the toric manifold itself?". In this talk we hope to illuminate some of the more obscure words in the above question, explain why the answer is sometimes yes (with caveat) and why that is interesting.