

Symmetries

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Abstract

Symmetry is all around us: in the shapes of leaves and flowers, in buildings, in art, and in the laws of physics. Scientists and mathematicians use symmetry to understand nature, make predictions, and find hidden structure in complicated systems. But what does symmetry really mean? In this Maths is Fun session, we will explore symmetry using visual examples and everyday patterns from sarees, wallpapers, and floor tiles. We will see how these familiar designs can be described using mathematics. We will also take a gentle “sneak peek” into group theory—the part of mathematics that studies symmetry and shows how complex patterns can be broken into simpler pieces. No advanced mathematical background is needed. This workshop is for anyone who enjoys patterns, structure, and discovering how mathematics connects to the world around us.