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Topology and geometry of polyhedral products

Cartesian products have embedded within them certain natural subsets which are indexed by combinatorial information. The geometric characterization of these subspaces, known now as *polyhedral products*, has wide application in toric geometry and topology, combinatorics, geometric group theory, number theory, free groups, homotopy theory and arachnid mechanisms. The cohomology of these spaces will be described briefly from complementary algebraic and geometric perspectives.