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Ehrhart polynomials of lattice-face polytopes.

There is a simple formula for the Ehrhart polynomial of a cyclic polytope. In this talk, we will explain that the same formula holds for a more general class of polytopes, lattice-face polytopes. We develop a way of decomposing any d -dimensional simplex in general position into $d!$ signed sets and carefully count the number of lattice points inside them. We are thus able to conclude the desired formula. (Received February 15, 2006)