

ABSTRACT. We prove that if a finitely presented group acts properly discontinuously, cocompactly and by isometries on a simply connected Riemannian manifold, then the Dehn function of the group and the corresponding filling function of the manifold are equivalent, in a sense described below. We also prove this result for simplicial complexes X where the metric on X restricts to a Riemannian metric with corners on each simplex.