PLATONIC TRIANGLES OF GROUPS

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Abstract. Non-positively curved triangles of finite groups are of cohomological dimension 2 over the rationals and have Property FA. We classify triangles of finite groups which satisfy certain geometric conditions including the Gauss–Bonnet theorem. We investigate whether or not these groups are virtually torsion-free, contain a free abelian subgroup of rank 2, are residually finite or are linear.