

Art Galleries, Fortresses, and Prison Yards: Illumination and Color

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Abstract

An art gallery problem asks for the minimum number of guards needed to protect a given geometric object such as a polygon or polyhedron. We emphasize results obtained using coloring arguments graphs. We also introduce a new technique (same-sign graphs) that simplifies the proofs of several known theorems. – This talk is accessible for graduate students in all areas of math, as well as advanced undergraduates.

Keywords: gallery problem, graph coloring.