Guarding Polyforms

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We consider variations of the original art gallery problem where the domain is a polyform, i.e. a plane figure or solid compound comprised of several edge- or face-aligned copies (pixels or voxels) of a given base shape. In particular we consider guarding polyominoes, polycubes, polyhypercubes, polyiamonds and polyhexes where the base shape is a square, cube, d-dimensional hypercube, equilateral triangle and a regular hexagon respectively. We generalize and unify the known results, and present some new results and open problems.

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