

Special Families of Prototiles

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A polyomino is *rectifiable* if it can tile a rectangle, and is a *reptile* if it can tile a larger copy of itself. For a rectifiable polyomino, we wish to determine all rectangles it can tile, or perhaps only all sufficiently large rectangles it tiles. For a reptile, we ask for all possible reptilings by that shape. We consider here several special families of such tiles. In some cases, we can give complete answers to the above problems, but others have open cases. We also consider natural extensions to higher dimensions. Several open questions will be formulated.

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