MATH 122
(Day 8)

Non-periodic Tessellations

Richard Hammack

http://www.people.vcu.edu/∼rhammack/Math122/

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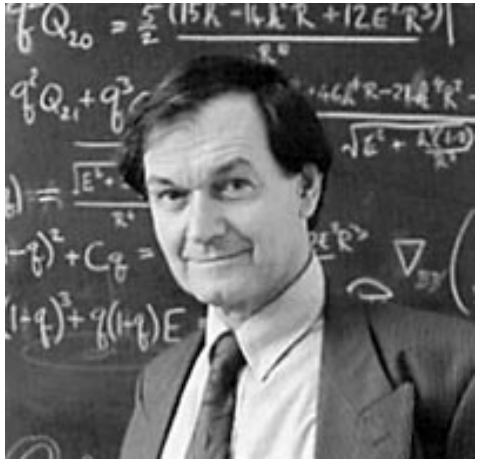
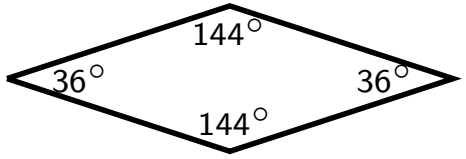
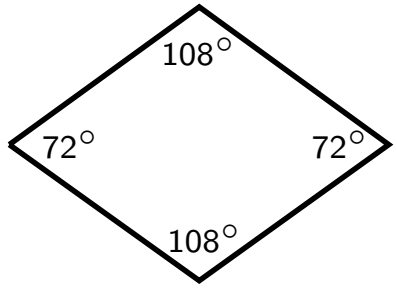


Then Roger Penrose discovered a simple one.

The *Penrose Tiling* uses two shapes:





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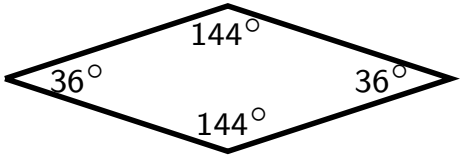

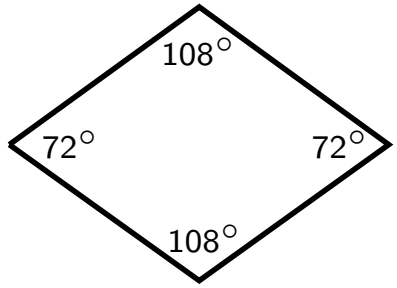

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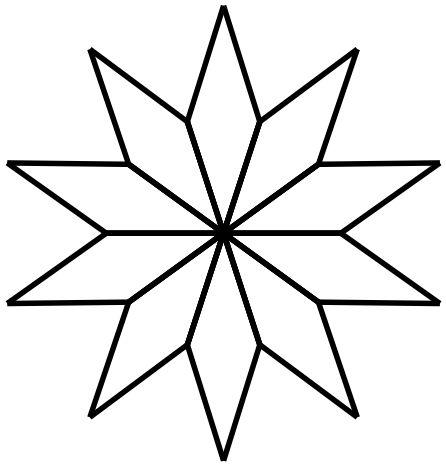

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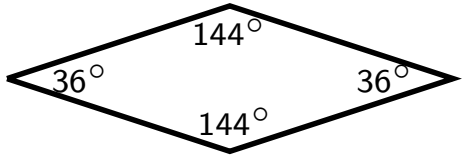

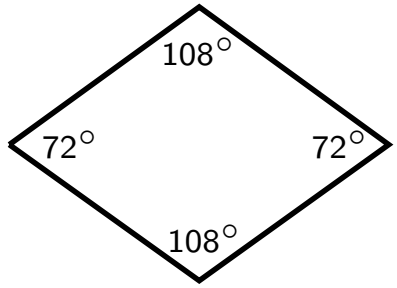

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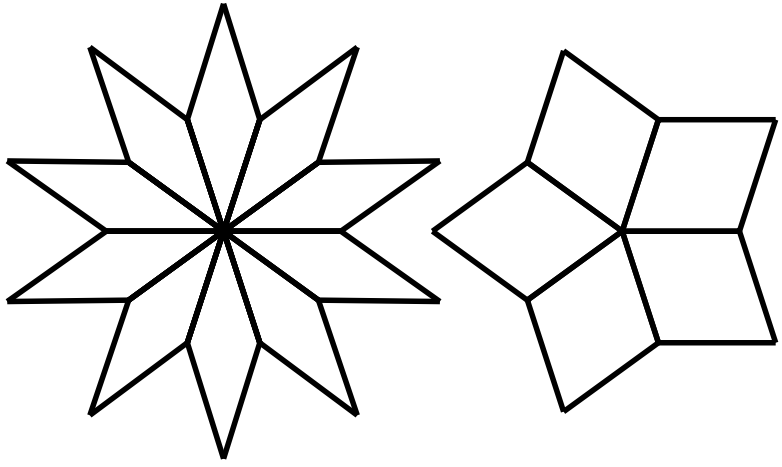

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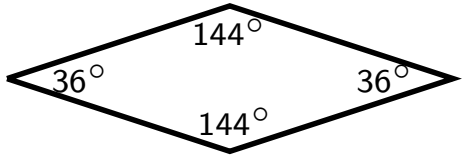

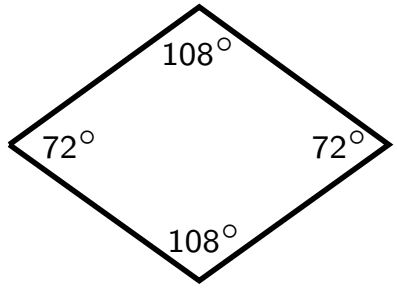

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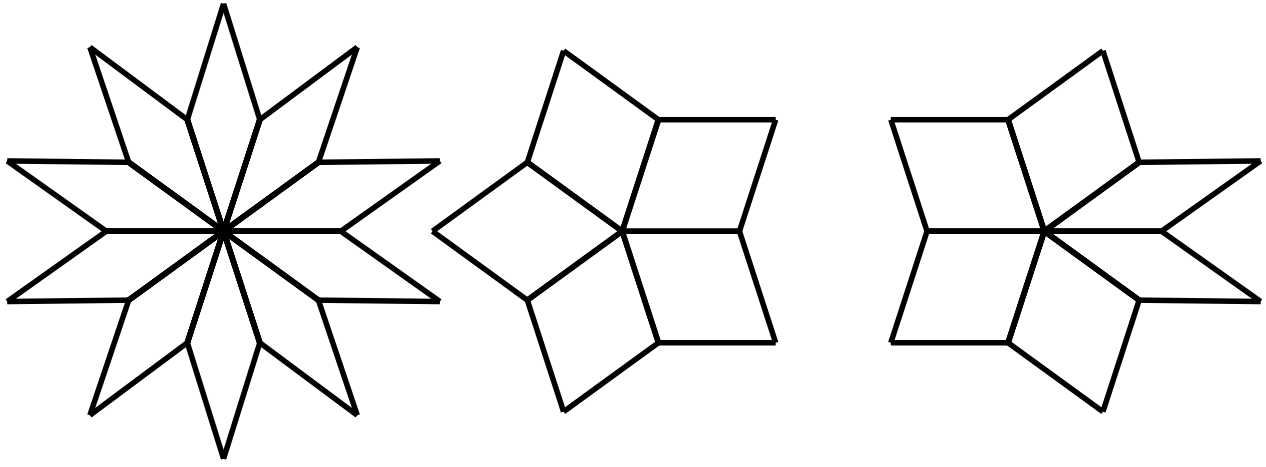
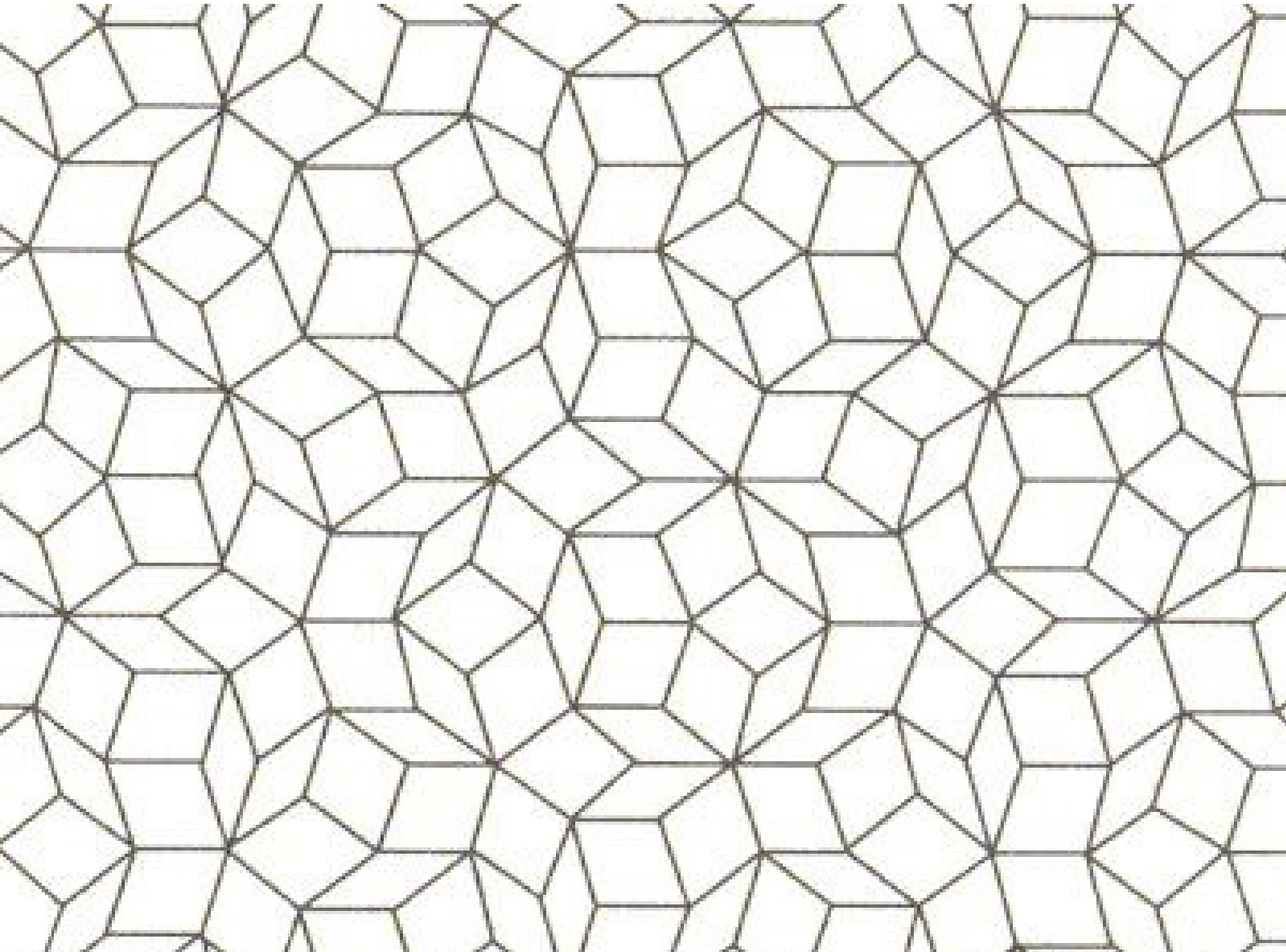
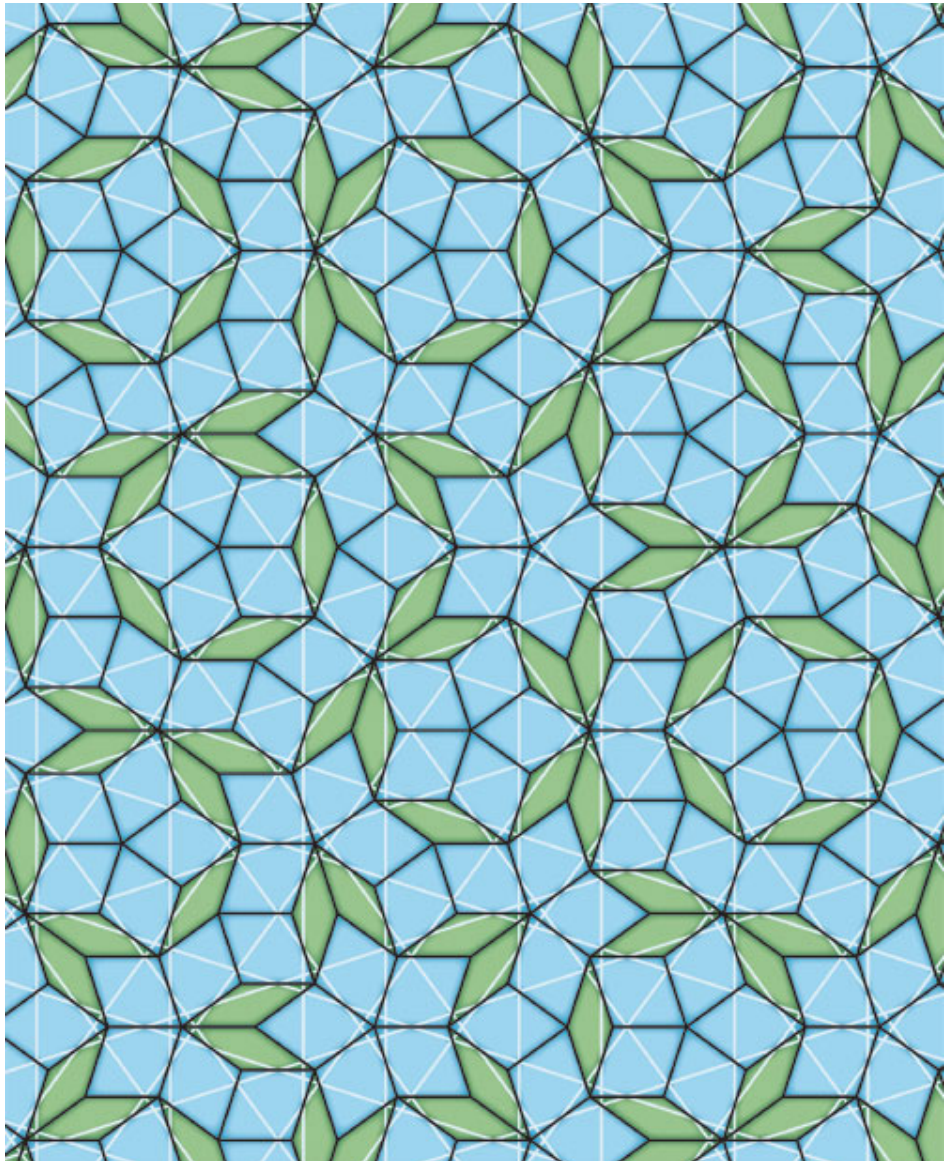
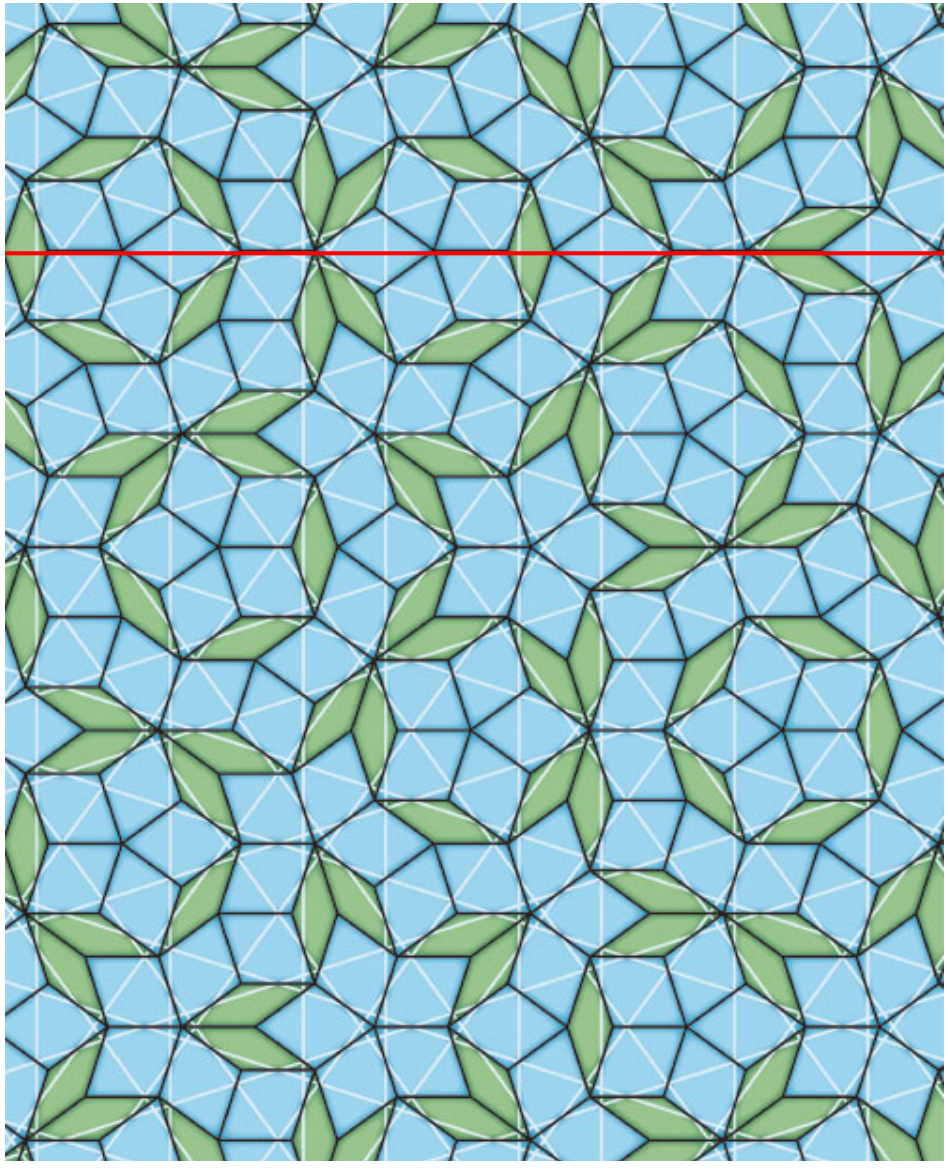






A Penrose tiling may have reflection and rotation symmetry.

It does NOT have translation symmetry



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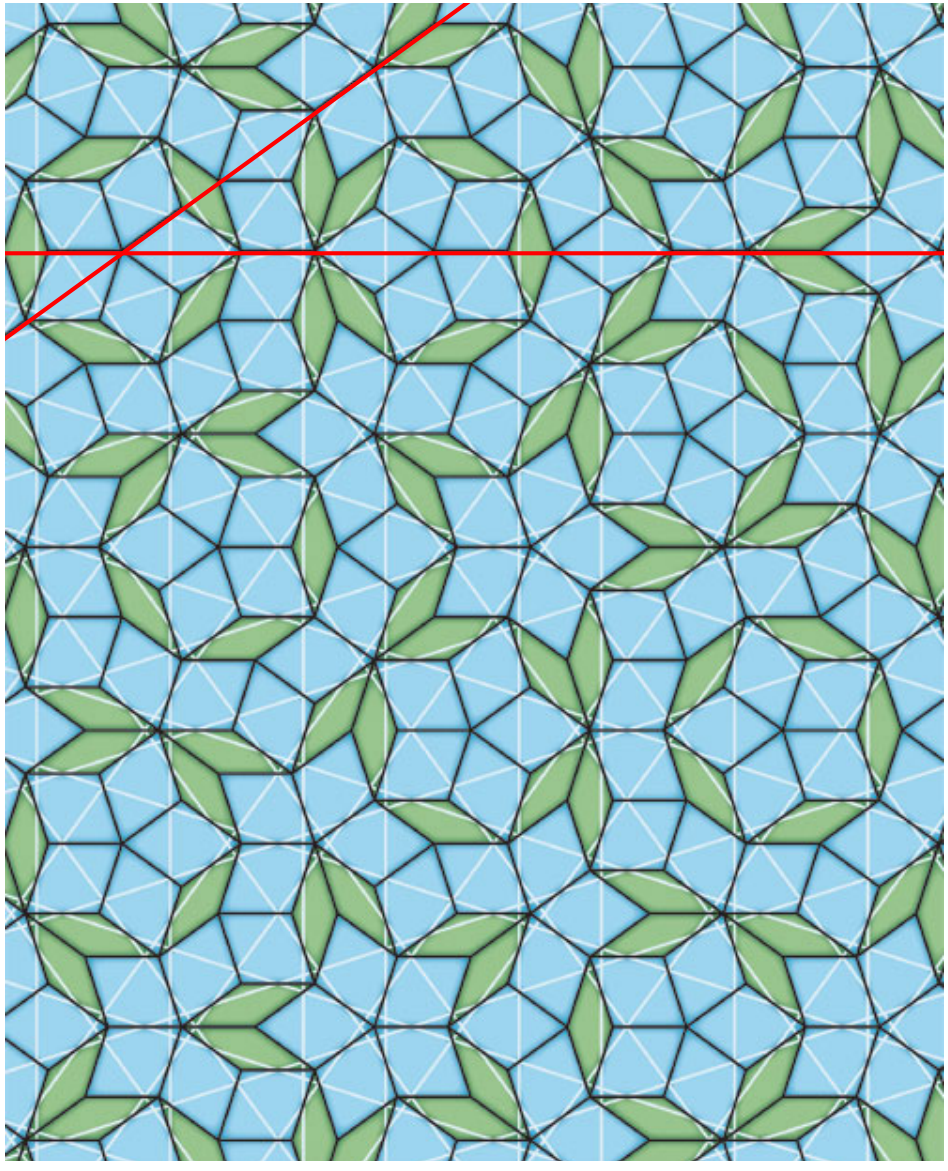

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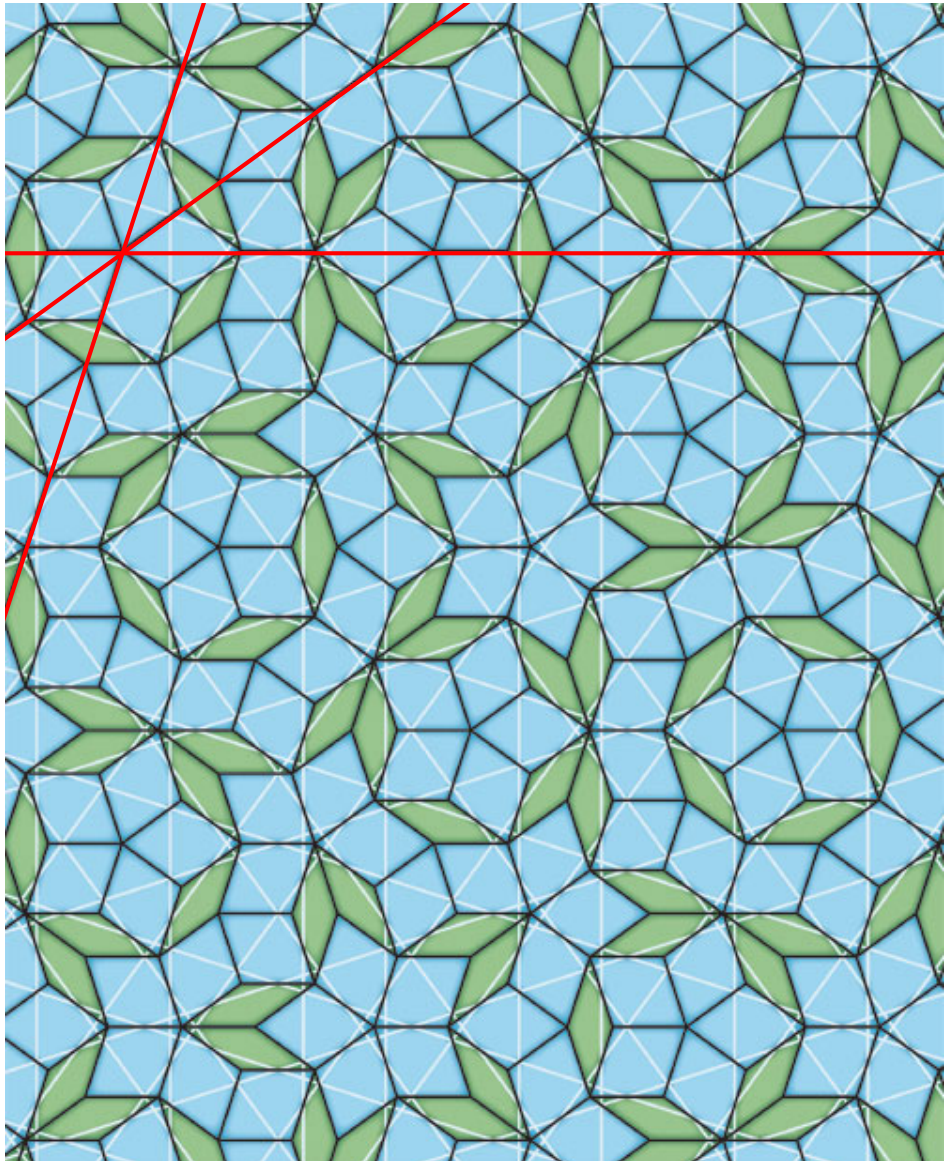

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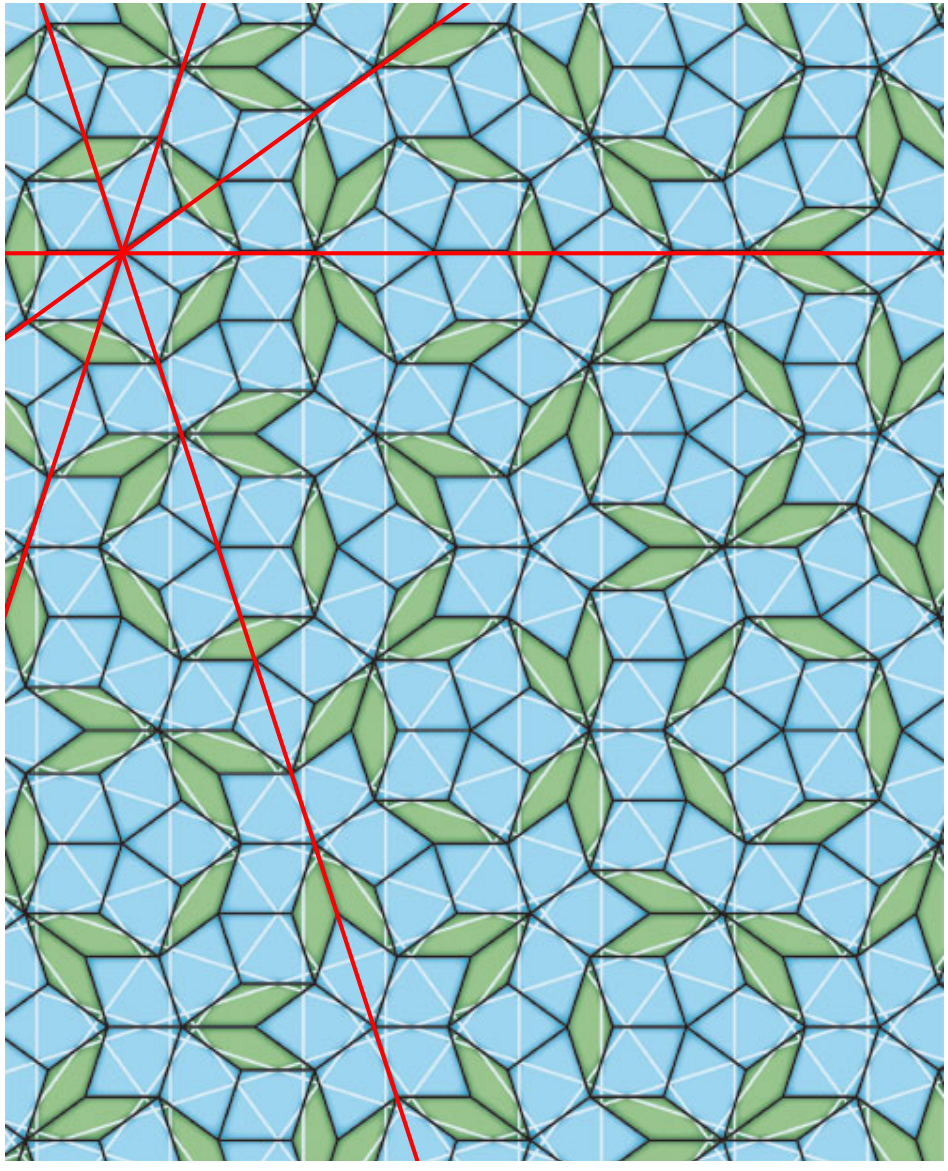

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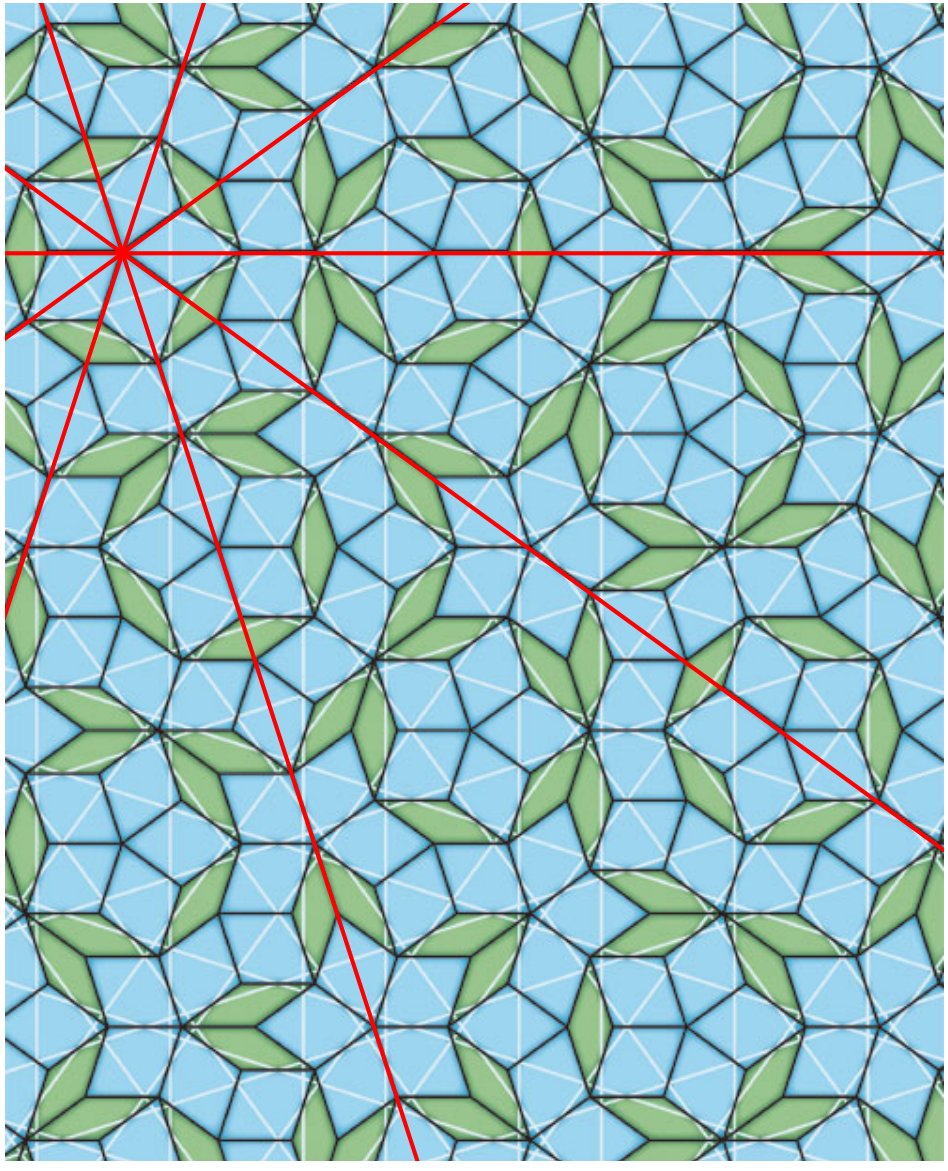

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The Penrose Tiling in Architecture and Craft

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Eric Osman, 2001

The Penrose Tiling in Architecture and Craft

Eric Osman, 2001

Kuilema Pottery

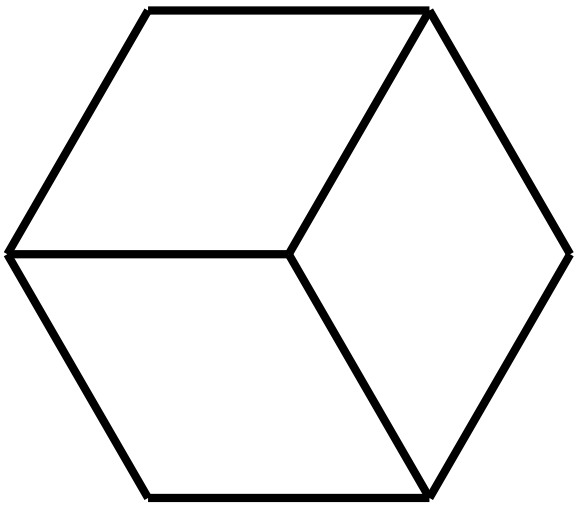
Amsterdam

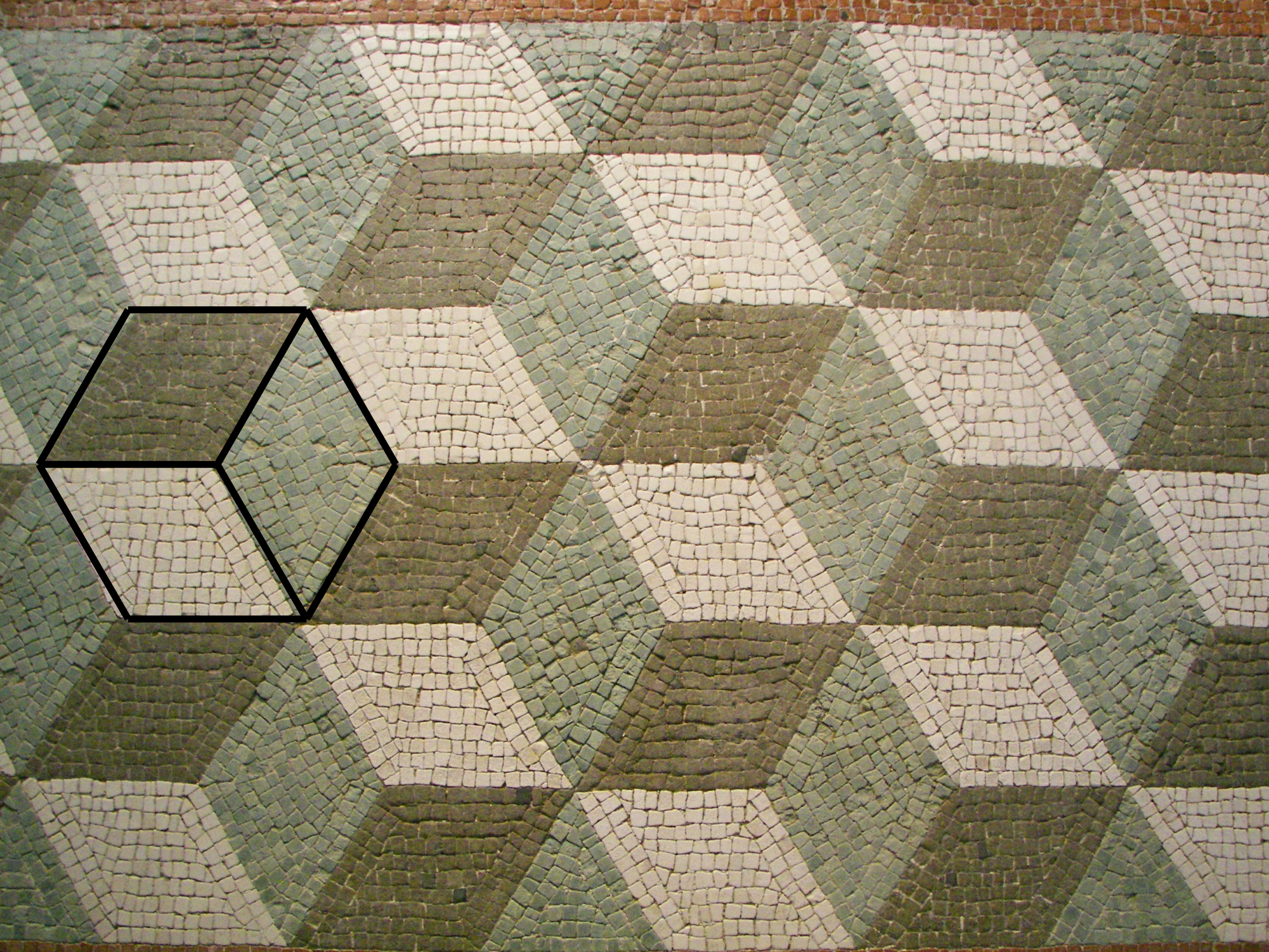
Floor, University of Western Australia

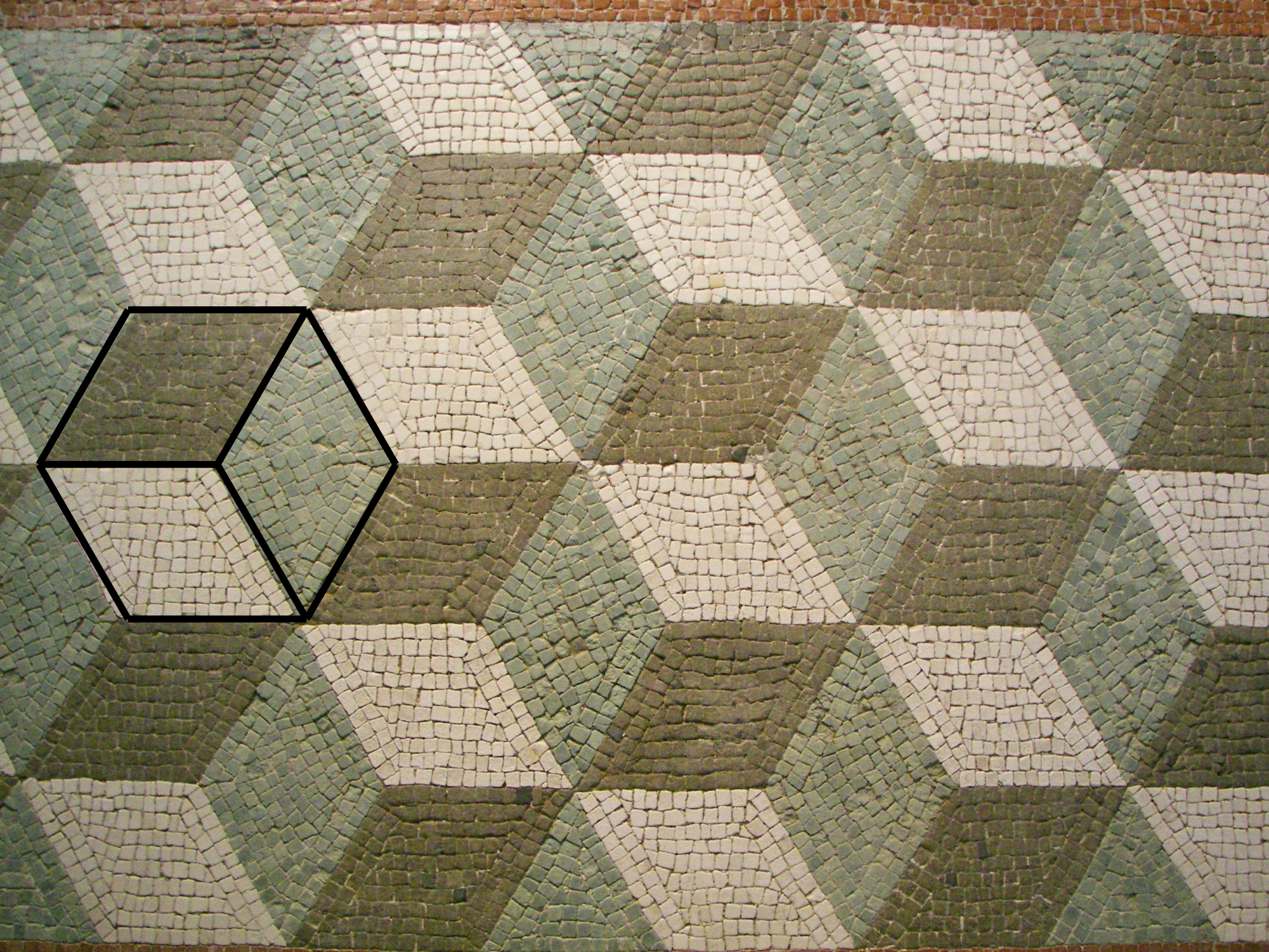
A Perspective on the Penrose Tiling:

A Perspective on the Penrose Tiling:

Three-dimensional cube







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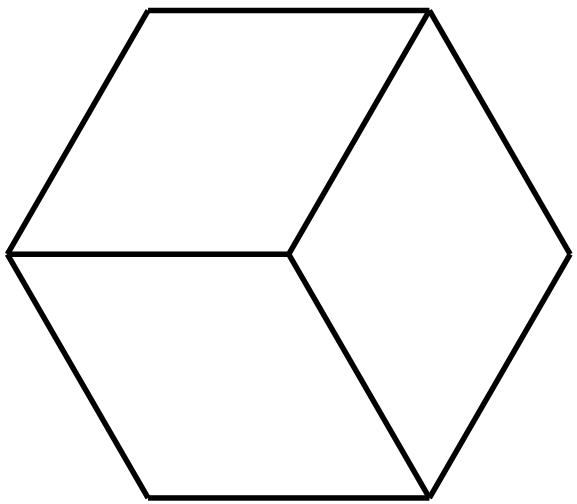

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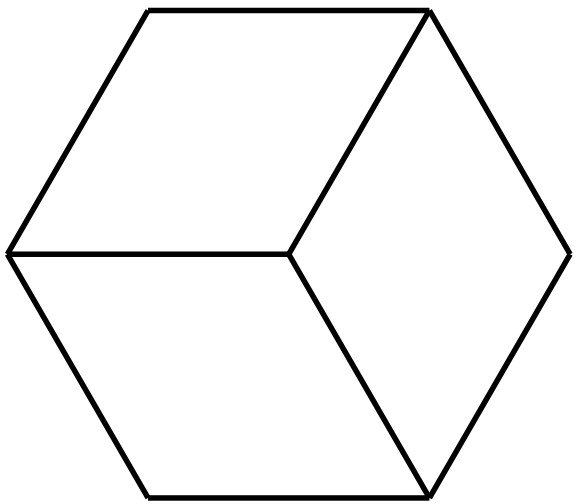
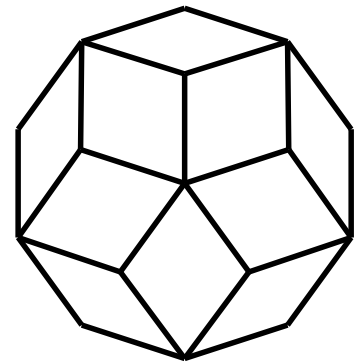
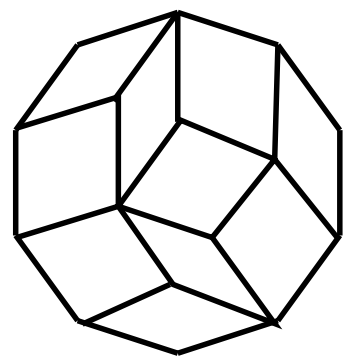
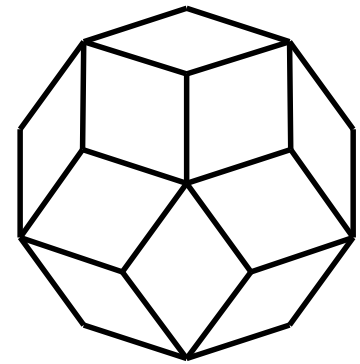




Five-dimensional cubes





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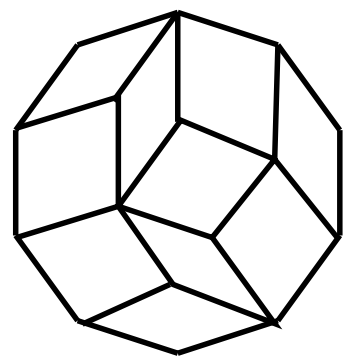
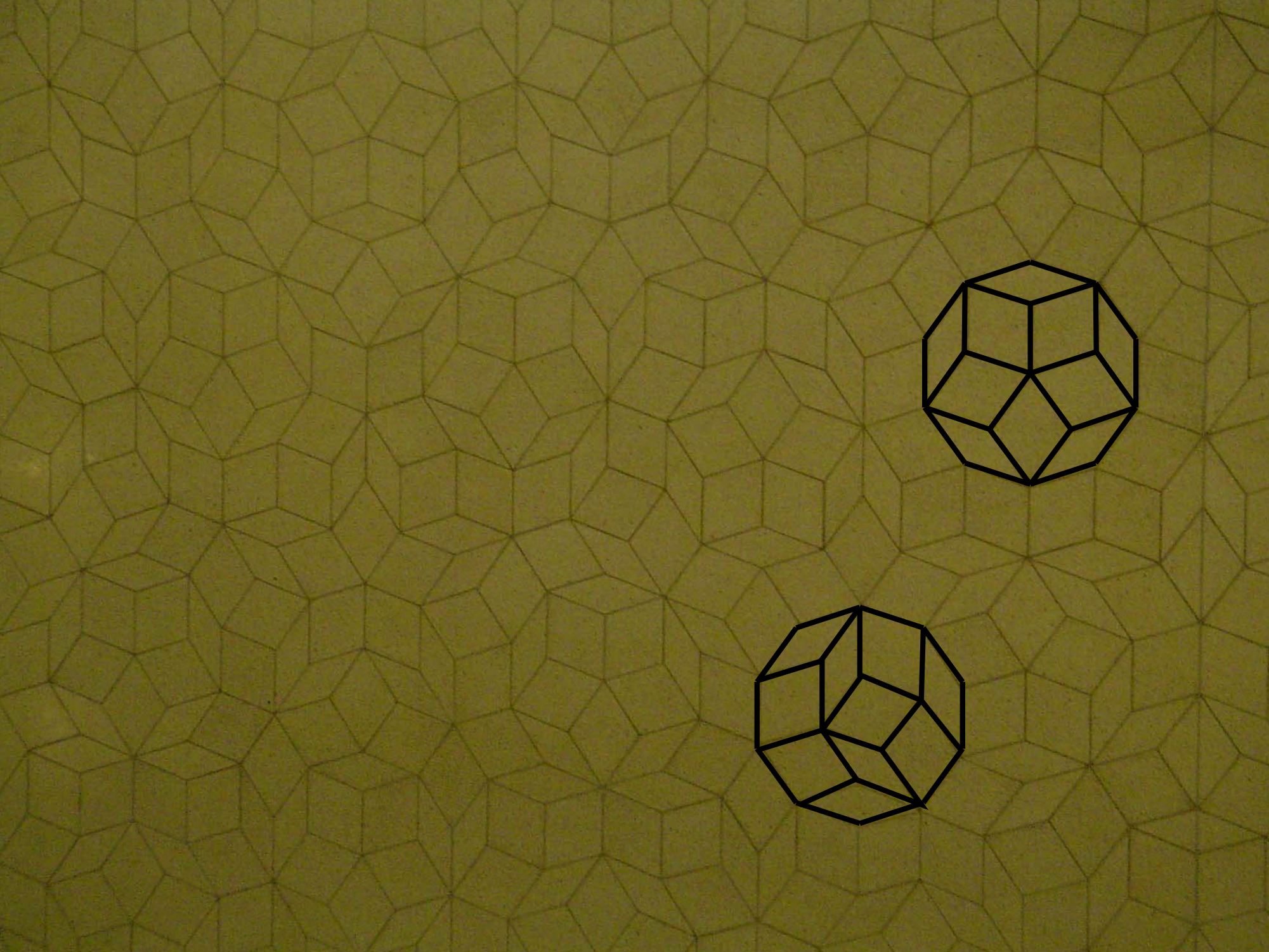
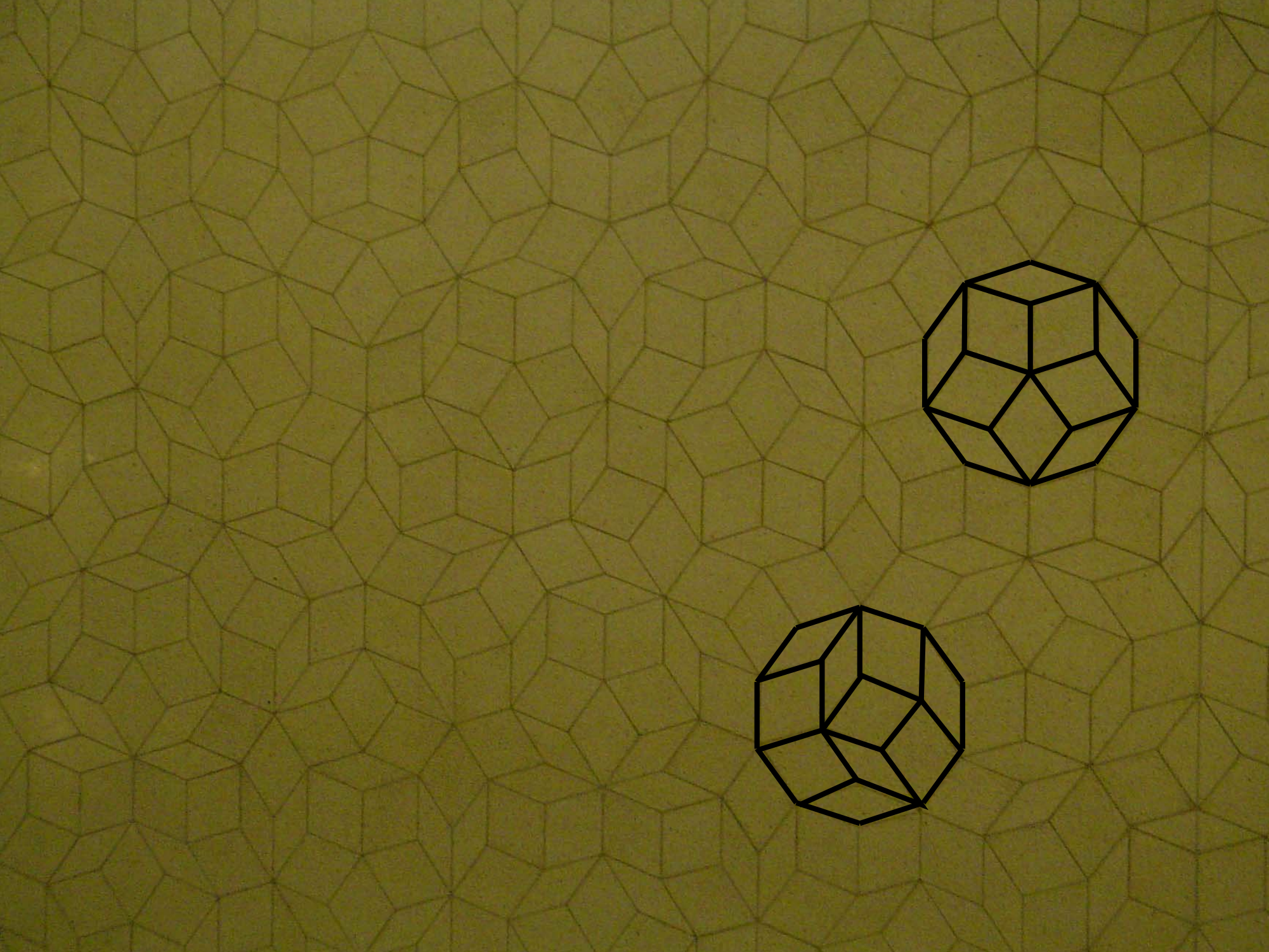
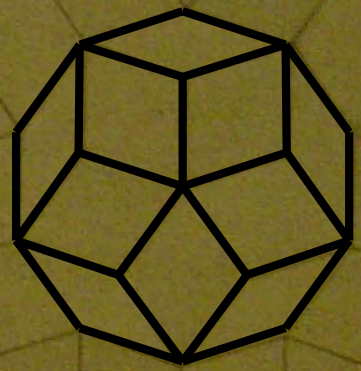
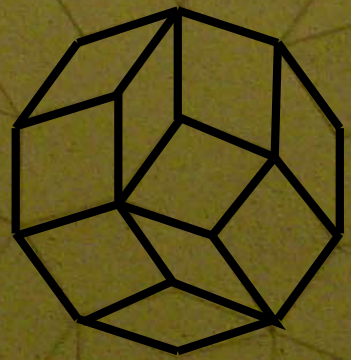








...more about the fourth- and fifth-dimension in MATH 123 (Visualization).



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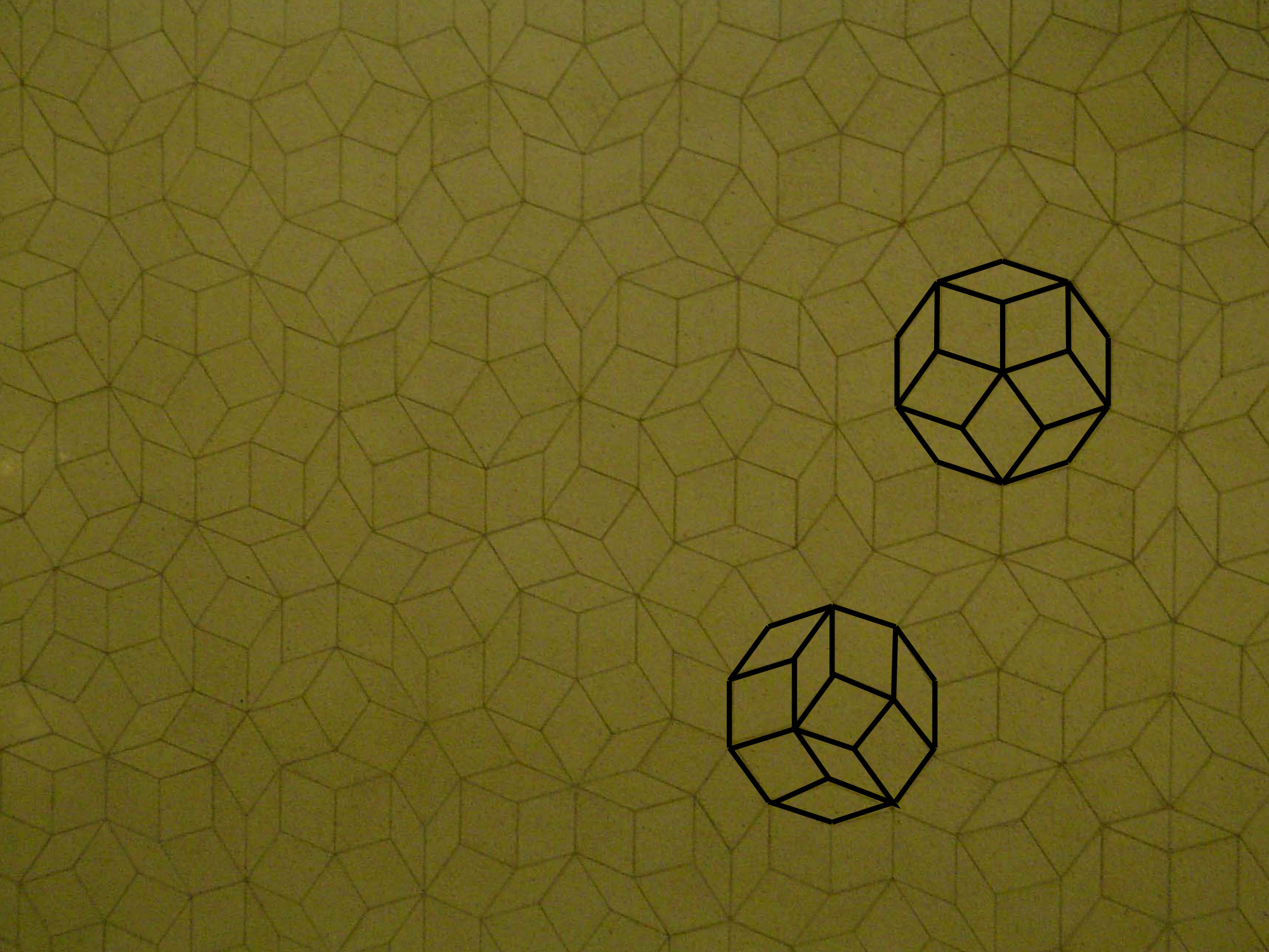
Next Time: *CRIT DAY*