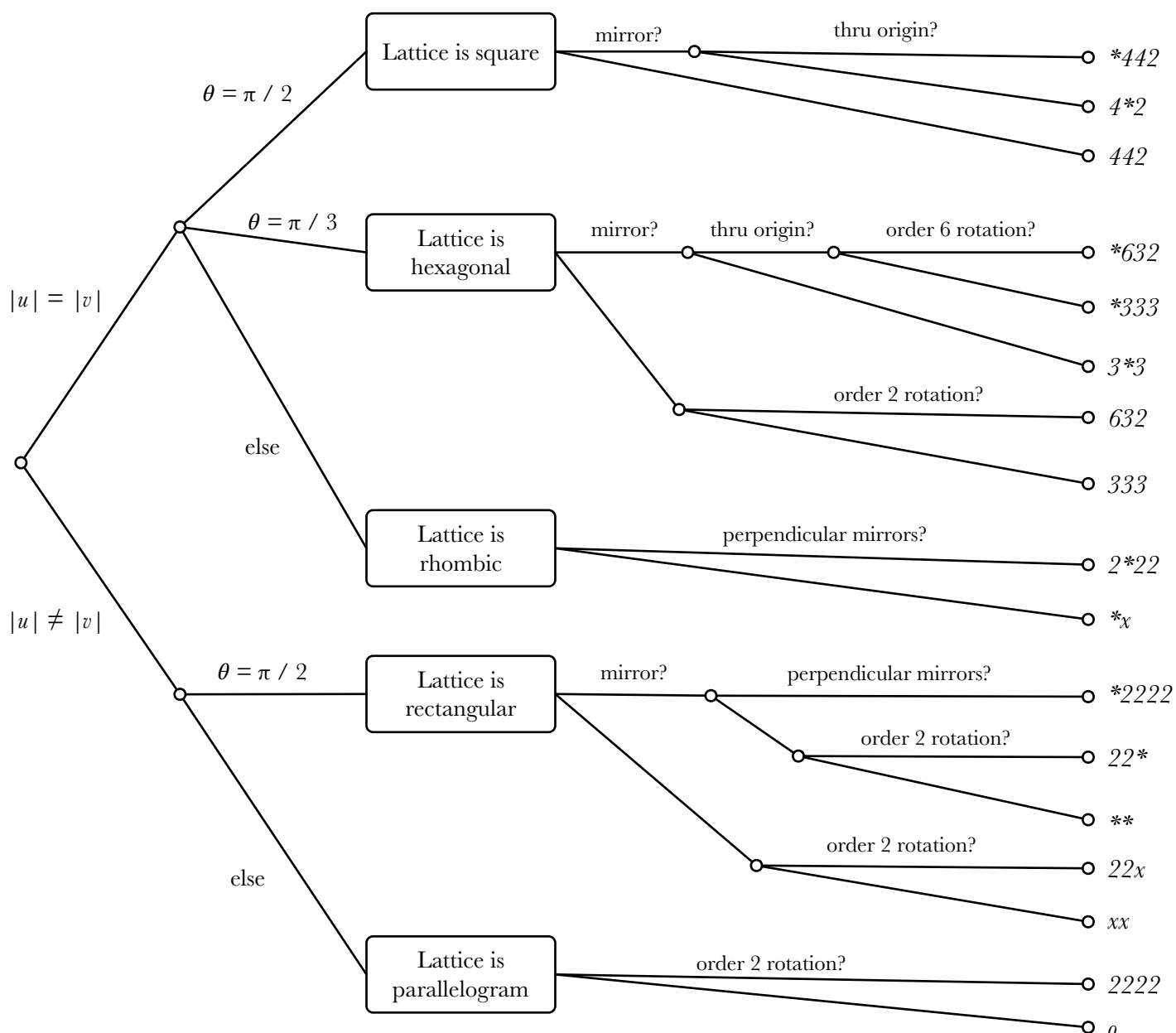


Drawing Wallpaper Groups Decision Tree

A pair of two-dimensional real vectors u and v determine a lattice. Given u, v and some drawing procedure in the lattice unit, the following decision tree determines which wallpaper group is depicted.

Let θ be the angle between u and v . Follow the tree from left to right and top down. The first two levels are conditions on u, v , which determine the lattice type. The next levels are conditions on how the lattice unit is filled.



References:

- [1] John H. Conway, Heidi Burgiel, Chaim Goodman-Strauss. *The Symmetries of Things*. A K Peters, Ltd., Wellesley, MA, 2008.
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- [3] Doris Schattschneider. *The Plane Symmetry Groups: Their Recognition and Notation*. American Math. Monthly. **85** (1978), no. 6, 439-450.
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