

✓ Dror Bar-Natan: Talks: - - - -

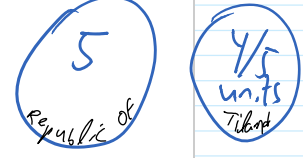
change background to a yellowish 333

Theorem. There are precisely 17 patterns with which to tile the plane, no more, no less. They are all made of combinations of the 10 basic features, 2, 3, 4, 6, 2, 3, 4, 6, M, and G, as follows:

	Dror's	Conway's	crystallo-graphic	Dror's	Conway's	crystallo-graphic
1	2222	2222	p2	33	3*3	p31m
2	333	333	p3	222	2*22	cmm
3	442	442	p4	22M	22*	pmg
4	632	632	p6	MM	**	pm
5	222	*2222	pmm	MG	*o	cm
6	333	*333	p3m1	GG	oo	pg
7	442	*442	p4m	22G	22o	pgg
8	632	*632	p6m	0	0	p1
9	42	4*2	p4g			

wiser lectures

Add "proof sketch"!  
 Not enough symmetry: - - - -  
 Too much symmetry: - - - -  
 Need "2 units of symmetry"



treehouse talk by Dror Bar-Natan

Video, handout, links at [drorbn.net/Treehouse](http://drorbn.net/Treehouse)

The Basic Features.

3 rotation only

M mirror-reflection

G glide-reflection

Gotta Catch 'Em All!

treehouse

QR code

Zipper from <http://www.steel.com/News/zipperbook/>

Foots talk!

Add book ref.  
 What chemists care about  
 ... 230 crystal structures...

Dror Bar-Natan's tilings worksheet: Classify the following pictures according to the following possibilities: 2222, 333, 442, 632, \*2222, 333, \*442, \*632, 4\*2, 3\*3, 2\*22, 22\*, \*\*, \*o, oo, 22o, and 0 (the pictures come in {context, pattern} pairs).

just worksheets

