

Guide to the recognising of wallpaper groups

1. Identify the smallest unit cell that represents all the symmetry included in the pattern. (Be particularly careful in the case of centered symmetry. Use rhomb shaped cells for patterns with 3 and 6-fold rotation axes.)
2. Search for mirror and glide planes, mark rotation axes if any.
3. Use the following table to identify the wallpaper group:
 - i. Find the least rotation.
 - ii. Are there mirror planes in the pattern?
 - iii. Answer the subsequent question(s) if there are any.

Least rotation	Has the pattern mirror plane(s)?	
	Yes	No
60°	p6m	p6
90°	Do the 4-fold axes lie on mirrors? yes - p4mm no - p4g	p4
120°	Is there at least one rotation centre not lying on mirrors? yes - p31m no - p3m1	p3
180°	Are the mirrors perpendicular? Yes No Is there at least one rotation centre not lying on mirrors? Yes - c2mm No - p2mm	p2mg Has the pattern glide plane? Yes - p2gg No - p2
360°	Has a glide plane not identical with mirror plane? Yes - cm No - pm	Has the pattern glide plane? Yes - pg No - p1