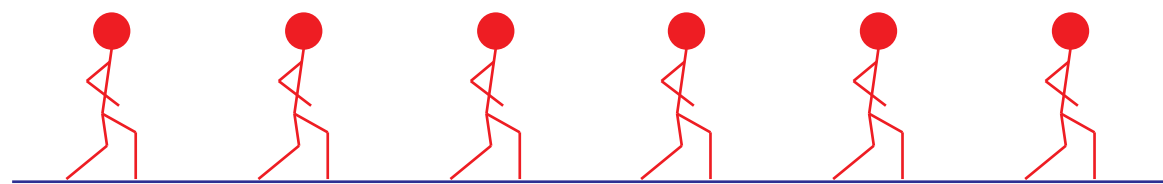


# Symmetries of the seven types of frieze pattern

T. Perutz  
M310T, University of Texas at Austin, 2010.

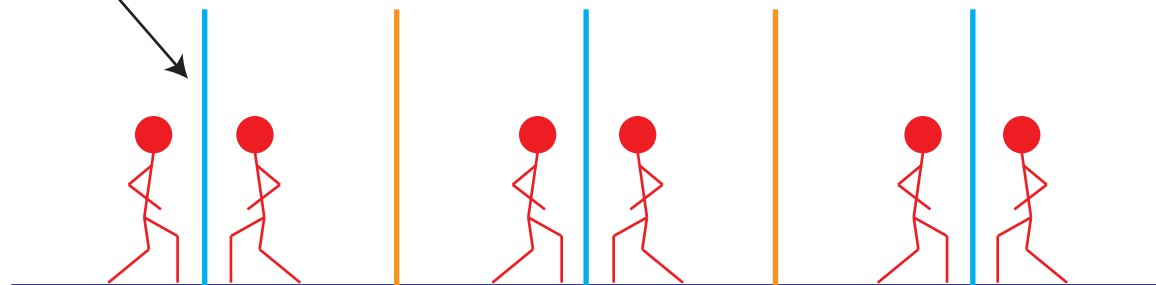


translations only

$\infty \infty$

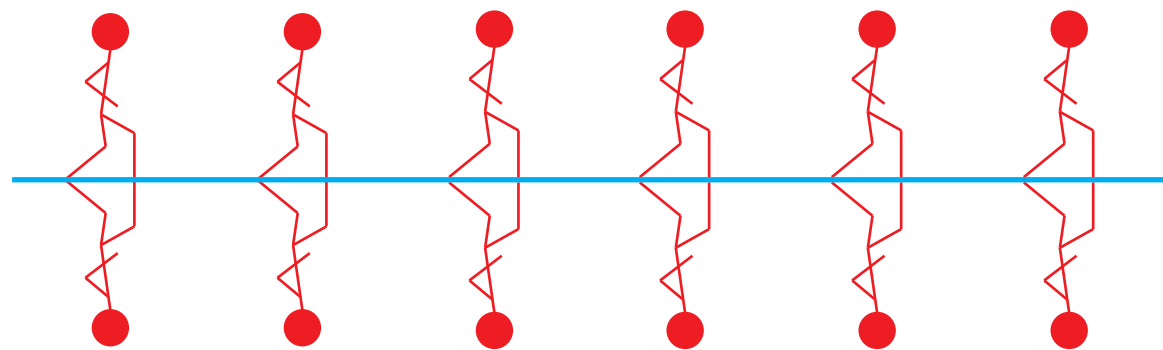
The orbifold signature of the pattern.

Mirrors are shown as lines. The colors indicate which mirrors are related to one another by symmetries.



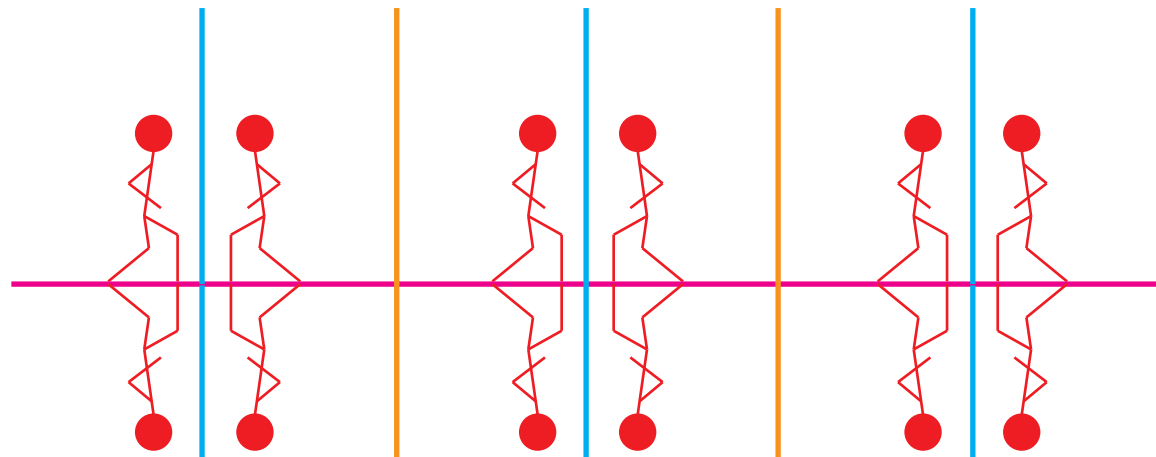
two vertical mirrors

$* \infty \infty$



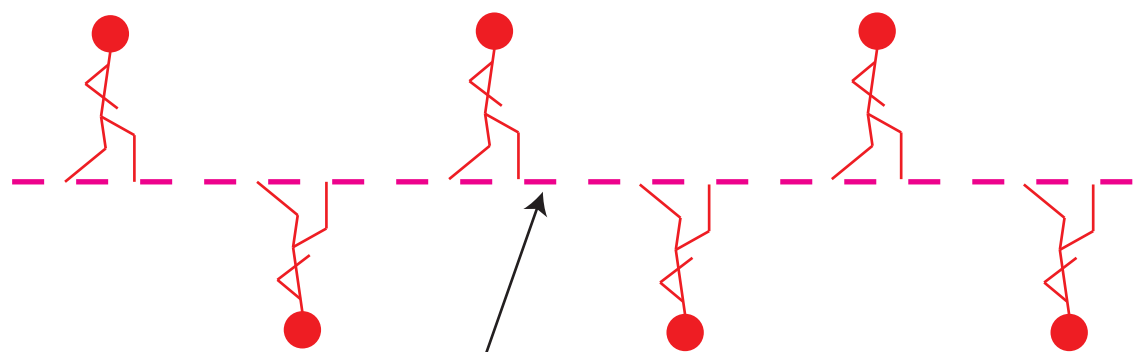
horizontal mirror

$\infty *$



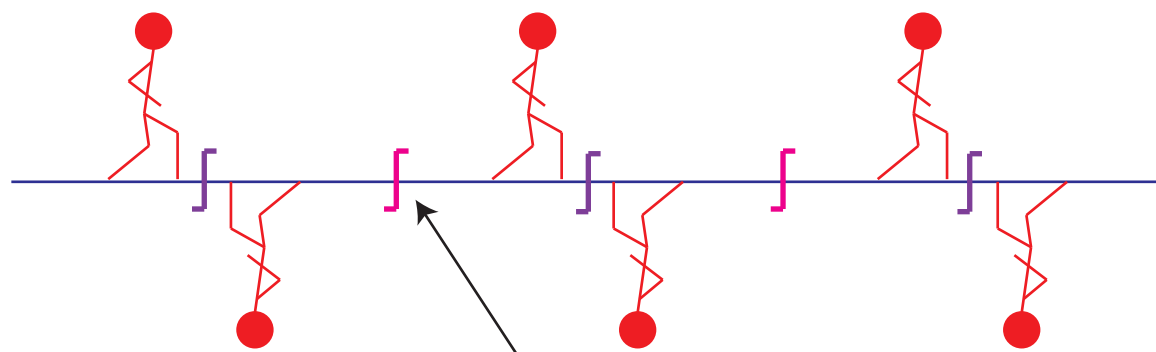
two vertical mirrors, one horizontal mirror

$* 2 2 \infty$



horizontal glide

$\infty x$



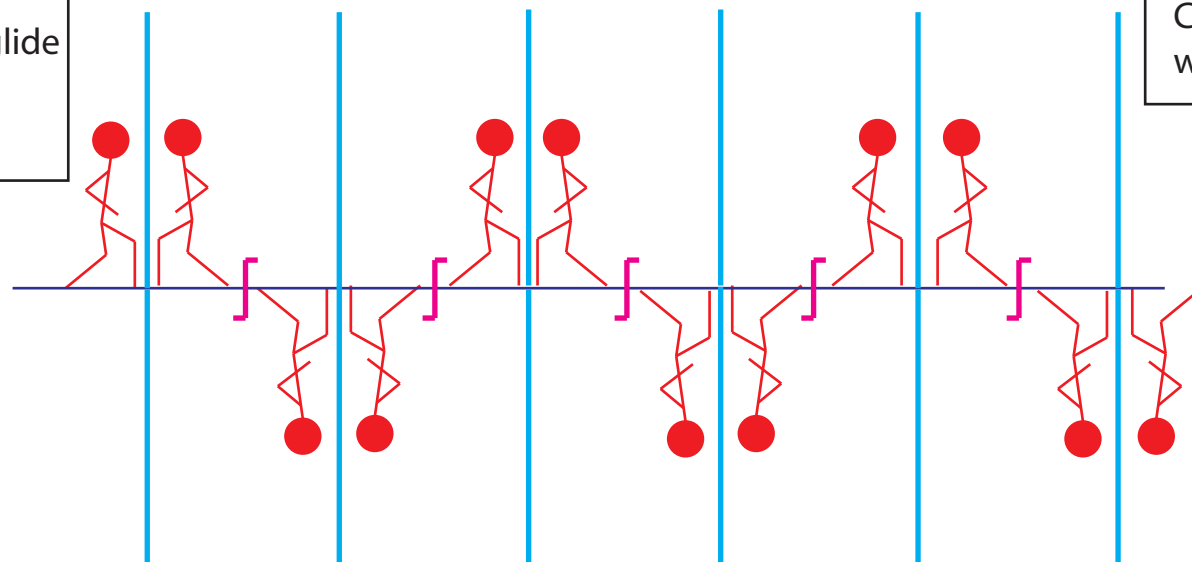
two half turns (not on mirrors)

$2 2 \infty$

The dashed line indicates the axis for a glide (which does not arise from a reflection followed by a half turn).

Centers for half turns are shown as  $\int$ . The colors indicate which half turns are related to one another by symmetries.

one vertical mirror, one half turn (not on the mirror)



$2 * \infty$