Math 116: HOMEWORK #15

Instructor: Sergei Chmutov

1.

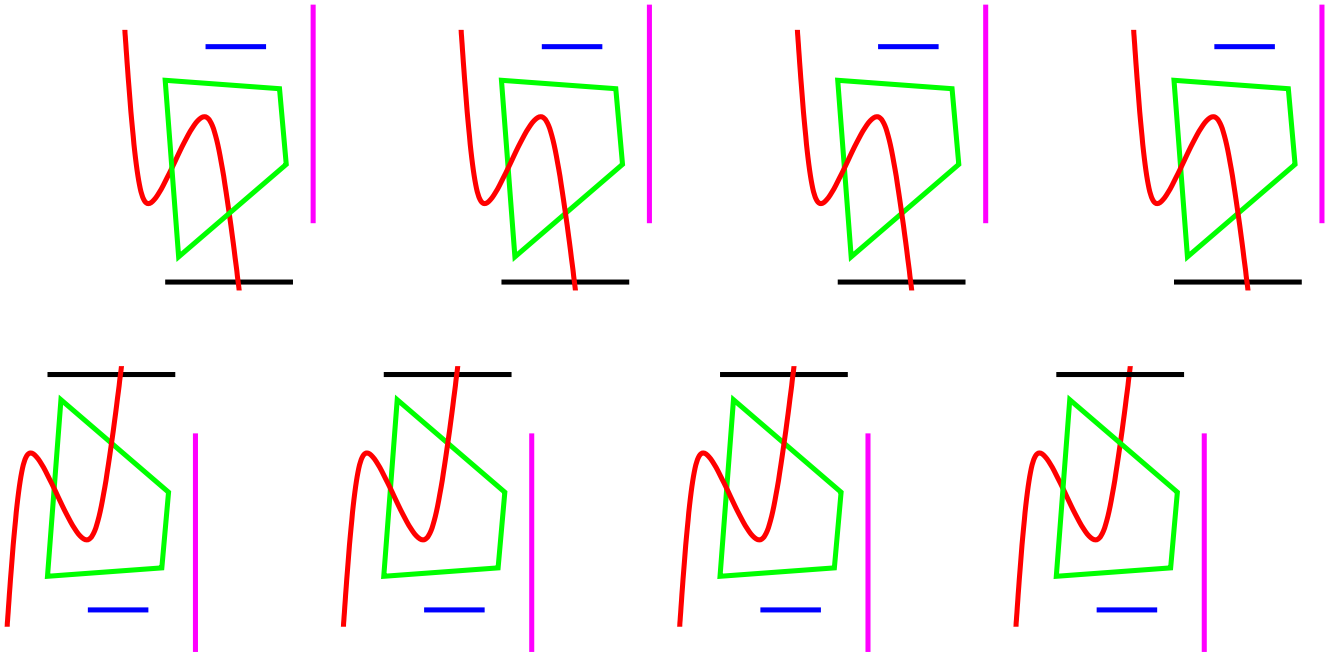
- Draw a figure with the symmetry group

$$Z_1,\ Z_2,\ Z_3,\ Z_4,\ Z_5,\ Z_6,\ D_1,\ D_2,\ D_3\ .$$

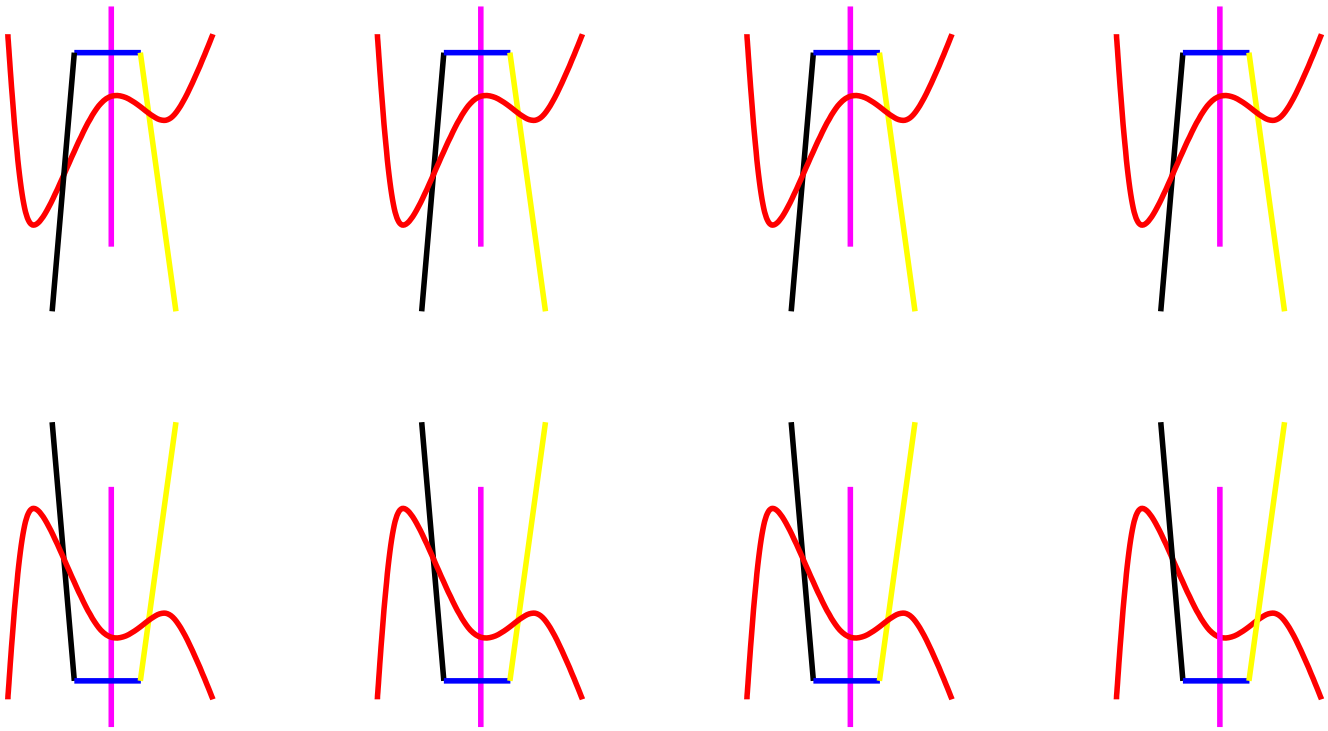
- Find the multiplication table for each of them.
- Recognize C_2, C_3, and C_5 among them.

2. For each of the following border patterns, give its symmetry type using the standard crystallography notation (mm, mg, $m1$, $1m$, $1g$, 12, 11).

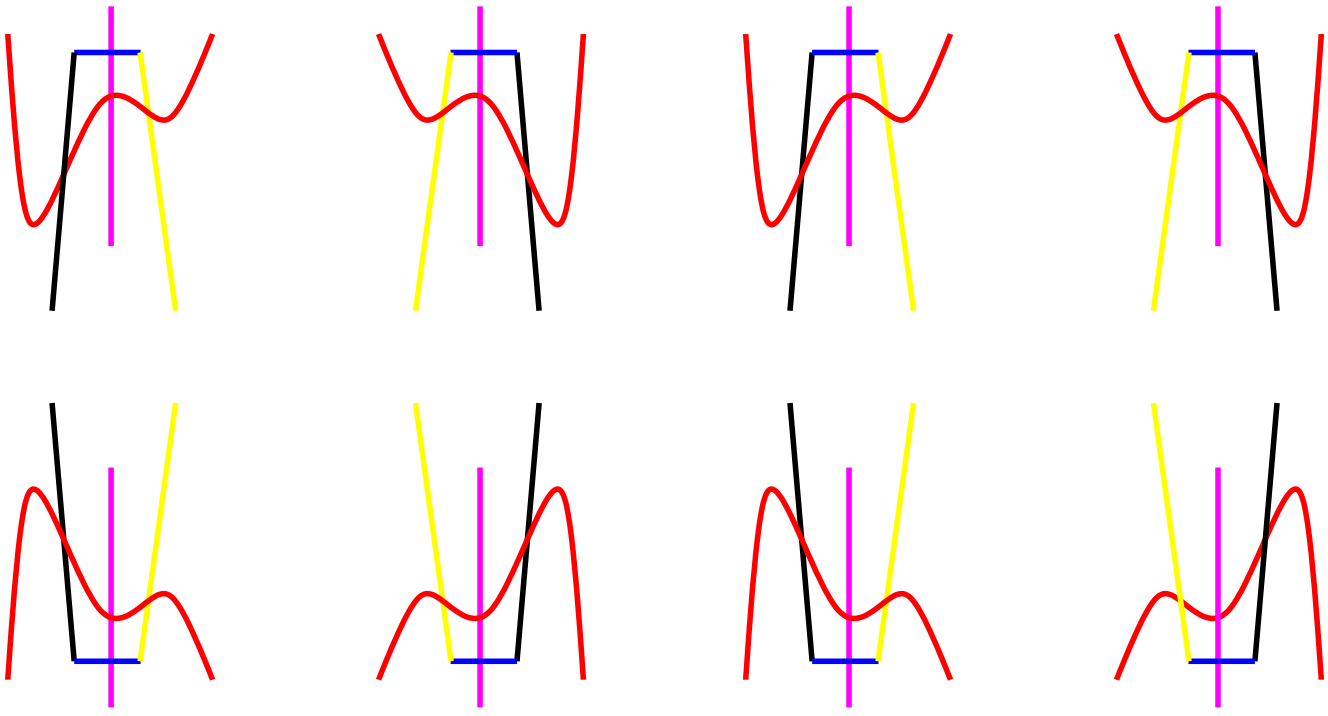
(A)



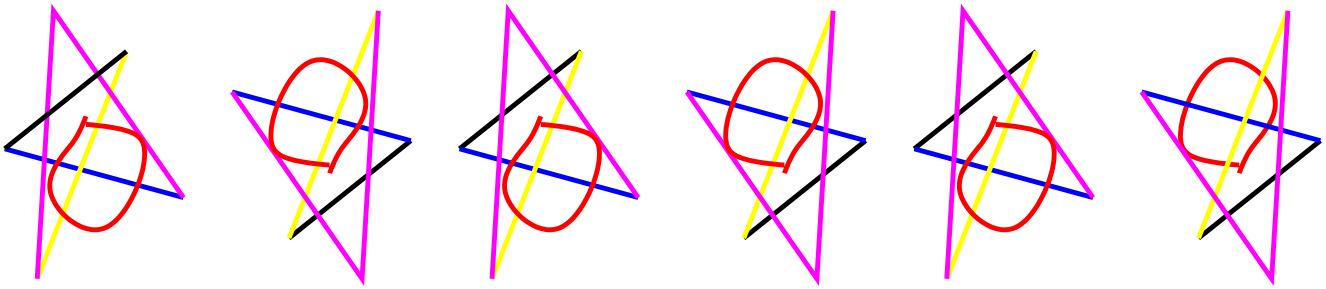
(B)



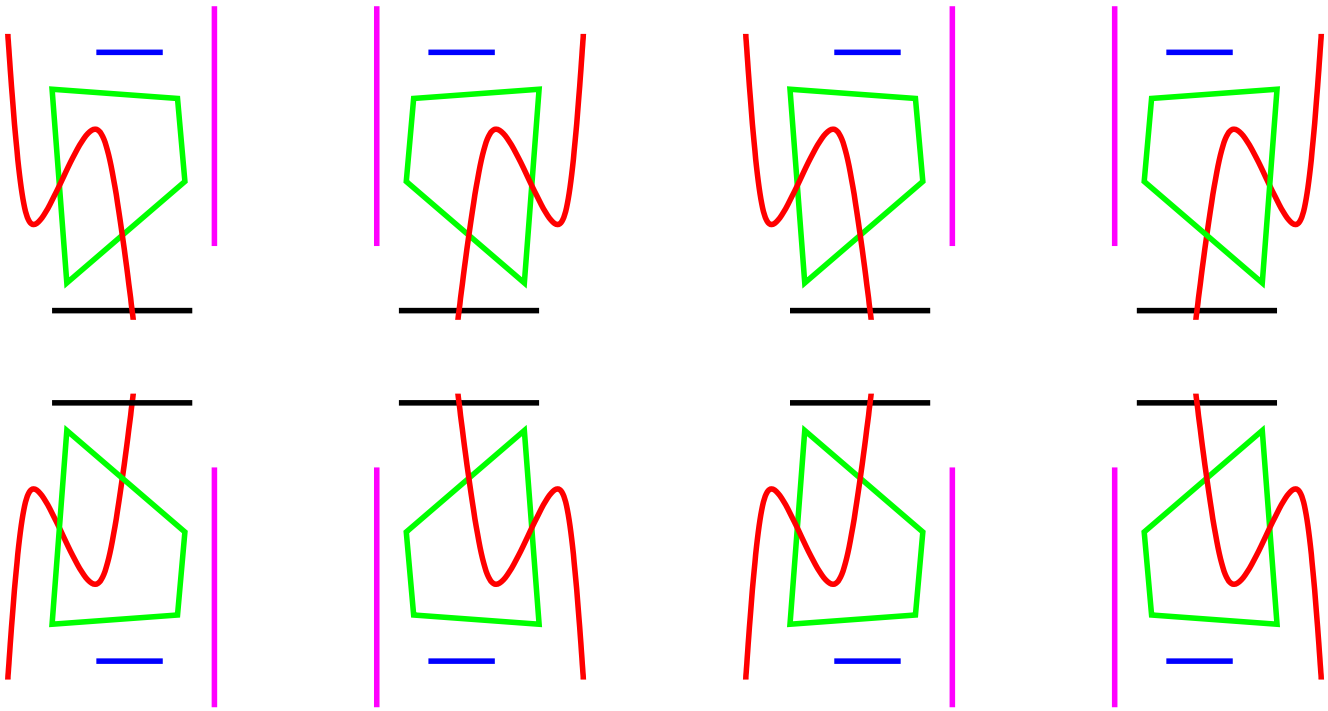
(C)



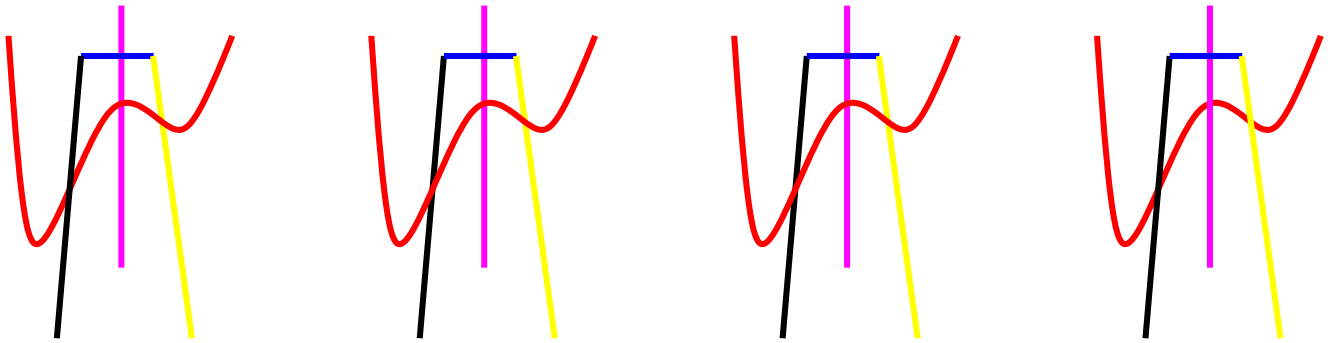
(D)



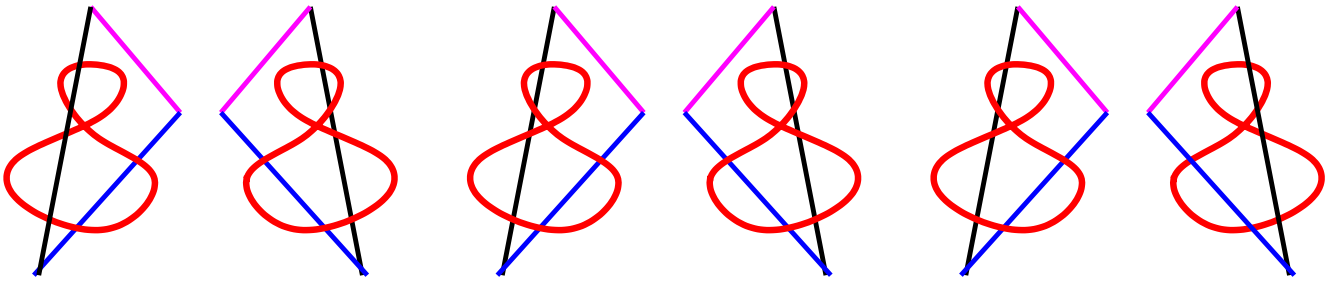
(E)



(F)



(G)



AND

p.377, Chapter 9, #'s: **2, 4, 6**