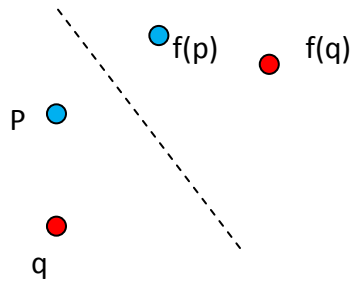
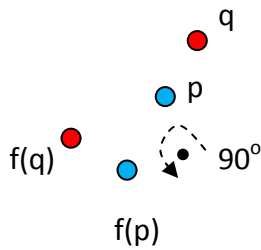


Definition (Plane Symmetry). A bijective mapping (function) from the plane to itself that preserves distances. There are 4 types:

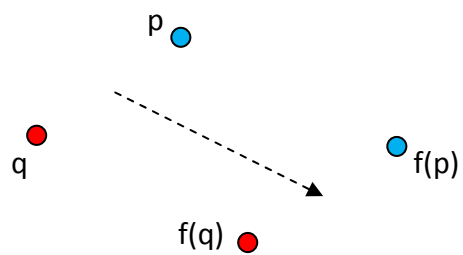
Reflection



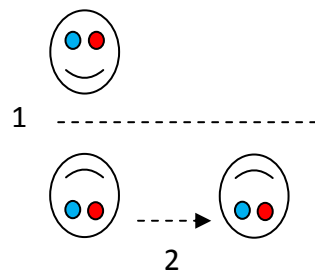
Rotation



Translation

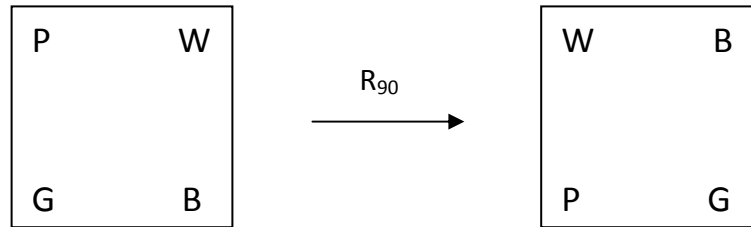


Glide Reflection

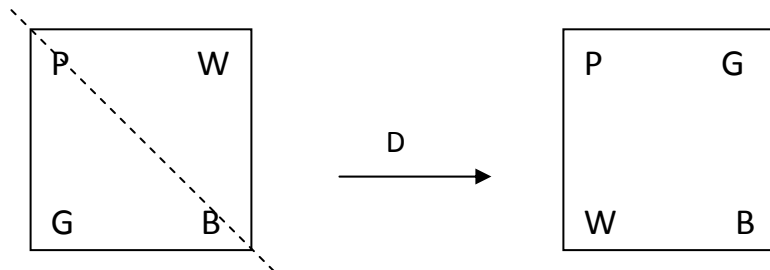


Definition (Plane Symmetry of a Figure). A bijective mapping (function) from the plane to itself that sends the points of a figure F to itself and preserves distances.

(For bounded figures we usually consider only rotations and reflections.)



$$R_{90}(P) = G \quad R_{90}(G) = B \quad R_{90}(B) = W \quad R_{90}(W) = P$$



$$D(P) = P \quad D(G) = W \quad D(B) = B \quad D(W) = G$$

Composition and Closure

