Practice Exam

Part I: Applying Rigid Motions (reflections)

(1) Apply the first rigid motion to the printed foot, resulting in an intermediate foot.

- (2) Apply the second rigid motion to your intermediate foot, resulting in a final foot.
- (3) Describe a single rigid motion that takes the printed foot to the final foot.

(1) and (2) are graded on location, angle, and left-vs-right. (3) is graded on the type (verb) and parameters (adverb) like "rotation about P of 37 degree clockwise"



(b)





Single motion:



Single motion:

Part II: Applying Rigid Motions (rotations)

- (1) Apply the first rigid motion to the printed foot, resulting in an intermediate foot.
- (2) Apply the second rigid motion to your intermediate foot, resulting in a final foot.
- (3) Describe a single rigid motion that takes the printed foot to the final foot.

(1) and (2) are graded on location, angle, and left-vs-right. (3) is graded on the type (verb) and parameters (adverb) like "rotation about P of 37 degree clockwise"



Single motion:

Single motion:



Single motion:



Single motion:

Part III: Identify Symmetry Elements Draw and label the elements of symmetry (lines of reflection and centers of rotation) of the following figures:













Part IV: Identify Rosette Groups Identify the symmetry groups of the following "Rosettes":



















Part V: Identify Frieze Groups Identify the symmetry groups of the following "Friezes":





Identify the symmetry groups of the following fancier "Friezes".

Part VI: Create your own groups Choose 5 Rosette groups (Zs and Ds) and 5 Frieze groups (Hops, Jumps, etc.). Draw a (pretty) picture for each group and label the symmetry clearly.