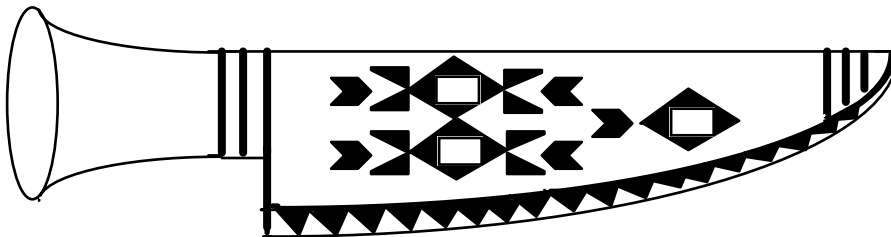


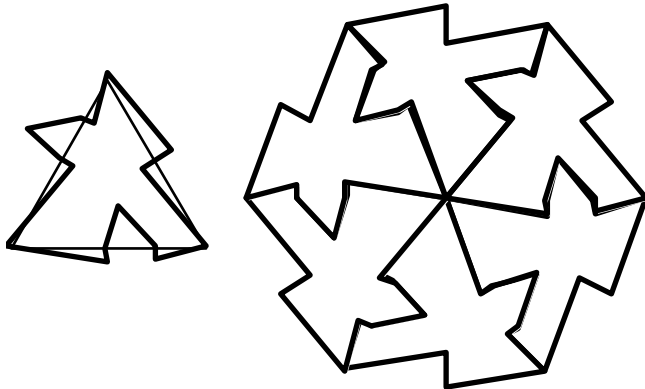
NAME: _____

P.I. G.G.54: Define, investigate, justify, and apply isometries in the plane (rotations, reflections, translations, glide reflections)

1. Summarize the isometries in this chapter.
2. Describe any isometries you see in the design on the Native American knife sheath.



3. A tessellation is a repeated geometric design that covers the plane with no gaps and no overlaps. The design in the pattern below is based on an equilateral triangle. Describe the isometries needed to create a tessellation from the figure shown.



4. Create a tessellation based on an equilateral triangle or a rectangle. Describe the transformations you used to create your tessellation.

A reflection involves flipping the figure in a line. A translation involves moving the figure up or down and to the right or left. A rotation involves moving the figure around a point, and a glide reflection

[1] involves three reflections, which can be rewritten as a translation and a rotation.

Answers may vary. Sample: a translation could be used to create the diamond shape on the right, and a

[2] glide reflection could be used to create the adjacent shape.

[3] translations and rotations

[4] Check students' work.
