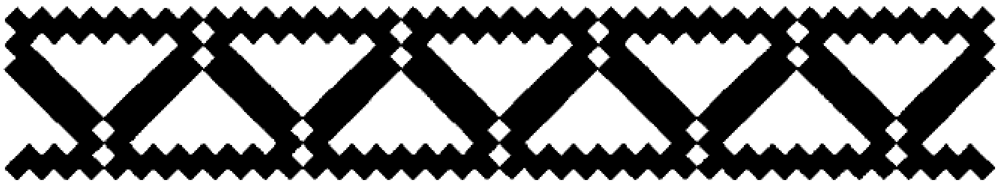
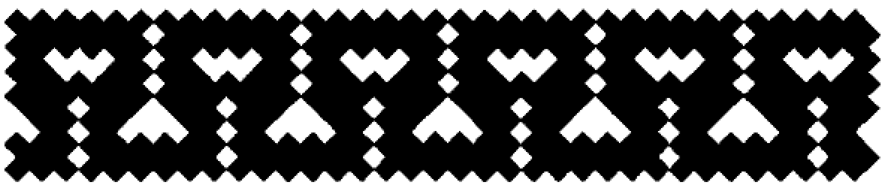
{African Strip Patterns

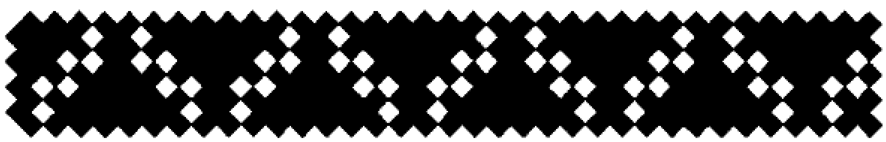
A



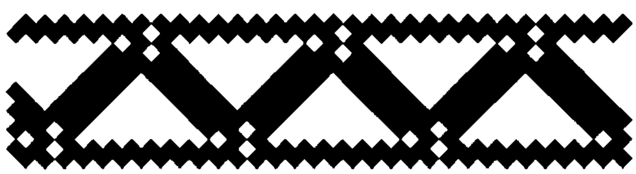
B



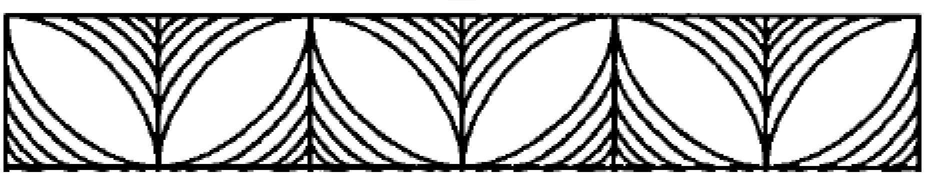
C



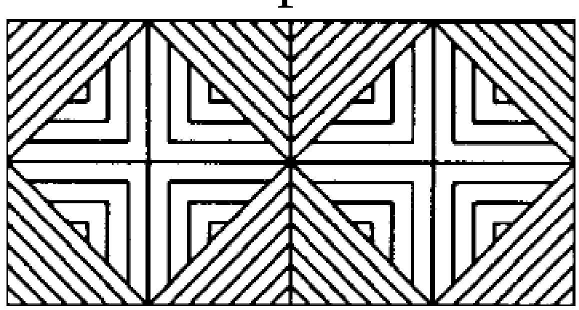
D



E



F



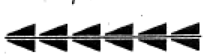
Let’s classify the symmetries of the frieze patterns on the last sheet and put our results in our table below. Put a Y if the given frieze has that symmetry, and an N if not.

	A	B	C	D	E	F
Translation						
Horizontal Reflection						
Vertical Reflection						
180^{o} Rotation						
Glide Reflection						

One can do these reflections/rotations/translations on any given motif, but is there any kind of systematic way to classify the patterns that emerge? YES!

There are Only Seven Distinct Frieze Patterns

One can prove (although we won’t) that there are, in fact, only 7 distinct patterns for friezes. Each of the friezes above represents one of the 7 distinct patterns. (Obviously we can create an infinite number of different strips even though there are only 7 basic patterns, simply by altering the underlying motif.)

	Translation	**Horizontal Reflection**	**Vertical Reflection**	**180 Degree Rotation**	**Glide Reflection**
pma2 					
p112 					
p111 					
p1a1 					
p1m1 					
pm11 					
pmm2