The Seven Types of Frieze, Band, or Border Patterns

**Translation (basic motion only)**
To generate a **11** (hop, p111, or T):
- Start with a rectangle (that contains a motif) and translate it to create a strip.

**Glide Reflection (one motion, then a translation)**
To generate a **1g** (step, p1g1, or G):
- Start with a rectangle (that contains a motif).
- Glide reflect the rectangle over a horizontal line.
- Translate the new two-part rectangle to create a strip.

**Rotation (one motion, then a translation)**
To generate a **12** (spinning hop, p112, or R):
- Start with a rectangle (that contains a motif).
- Rotate the rectangle 180° around a point on the centerline.
- Translate the new two-part rectangle to create a strip.

**Vertical Reflection (one motion, then a translation)**
To generate an **m1** (sidle, pm11, or V):
- Start with a rectangle (that contains a motif).
- Reflect the rectangle over a vertical side.
- Translate the new two-part rectangle to create a strip.

**Horizontal Reflection (one motion, then a translation)**
To generate a **1m** (jump, p1m1, or H):
- Start with a rectangle (that contains a motif).
- Reflect the rectangle over a horizontal side.
- Translate the new two-part rectangle to create a strip.

**Rotation then a Vertical Reflection (two motions, then T)**
To generate an **mg** (spinning sidle, pmg2, or RV):
- Start with a rectangle (that contains a motif).
- Rotate the rectangle 180° around a point on the centerline.
- Reflect the new two-part rectangle over a vertical side.
- Translate the new four-part rectangle to create a strip.
Note: VR cannot generate the same pattern, but VG could.

**Alternate Horiz. then Vert. Reflections (two motions, then T)**
To generate an **mm** (spinning jump, pmm2, or HV):
- Start with a rectangle (that contains a motif).
- Reflect the rectangle over a horizontal side.
- Reflect the new rectangle over a vertical side.
- Translate the new four-part rectangle to create a strip.
Note: VH, RH, HR, and VR could generate the same pattern.