STRIP PATTERNS
also known as Frieze patterns
r1  Translation

- No rotations or reflections
  - Just move the figure over the length and direction of the yellow arrow.
- r2
  - Half turns
    - Rotate the N around the yellow star by 180 degrees

N N N N N N N N N N N N N N N

N * N *
Vertical reflections

Reflect the V over the yellow line.
Horizontal reflections

Reflect the D over the yellow line.
- r2mm

- Vertical and horizontal reflections with half turns
  - Yellow lines are lines of reflection
  - Green stars are points of rotation.
Glide Reflections (footprints)

Reflect the foot over the red line, then move the foot in the direction and length of the blue line.
r2mg

- Vertical reflections and glide reflections with half turns
<table>
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<th>Transformation Type</th>
<th>Symbol</th>
<th>Pattern</th>
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<td>r1</td>
<td>L L L L L L L L L L L L</td>
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<td>Half-turns</td>
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<td>Vertical reflections</td>
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<td>Vertical reflections and glide reflections with half-turns</td>
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<td>V V V V V V V V V V V</td>
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**Flow chart**
Flow Chart
Frieze (border) patterns

Is there a vertical Reflection

Yes

Is there a horizontal reflection?

Yes

Is there a rotation?

Yes

r2mm

No

r2mg

Is there a horizontal reflection?

Yes

r1m

No

r11m

Is there a horizontal or glide reflection?

Yes

r11g

No

r2

Is there a rotation?

Yes

r1

No

r1m
Identify the following
What happens to each figure in order to get to the next figure?

You must remember that these patterns are supposed to go on to infinity.
What would be an everyday use of strip patterns?
Laying tiles that have patterns on them to make a design.
Strip in white?  Strip in Black?