$\underset{\scriptscriptstyle \rm By \ Jack \ Schmidt}{Symmetry \ worksheet \ V}$

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11.7 Symmetries of border patterns

Now our pictures are infinite! We can have different kinds of symmetries. We study patterns that have translation (slide) symmetries in one direction (horizontal) with a smallest translation distance. These are called **border patterns** or **frieze patterns** or **strip patterns**.

Look at the Inca strip patterns.

1. Cut the transparency sheet into strips, and use them to find and mark all symmetries of the five Inca patterns. (draw them on the back)

2. Which two of the five have the same symmetry group?

3. Draw a few new frieze patterns.

• A frieze pattern with exactly one reflection symmetry.

• A frieze pattern with a glide reflection and at least one rotation.

• A frieze pattern with rotation symmetry, and exactly one reflection.