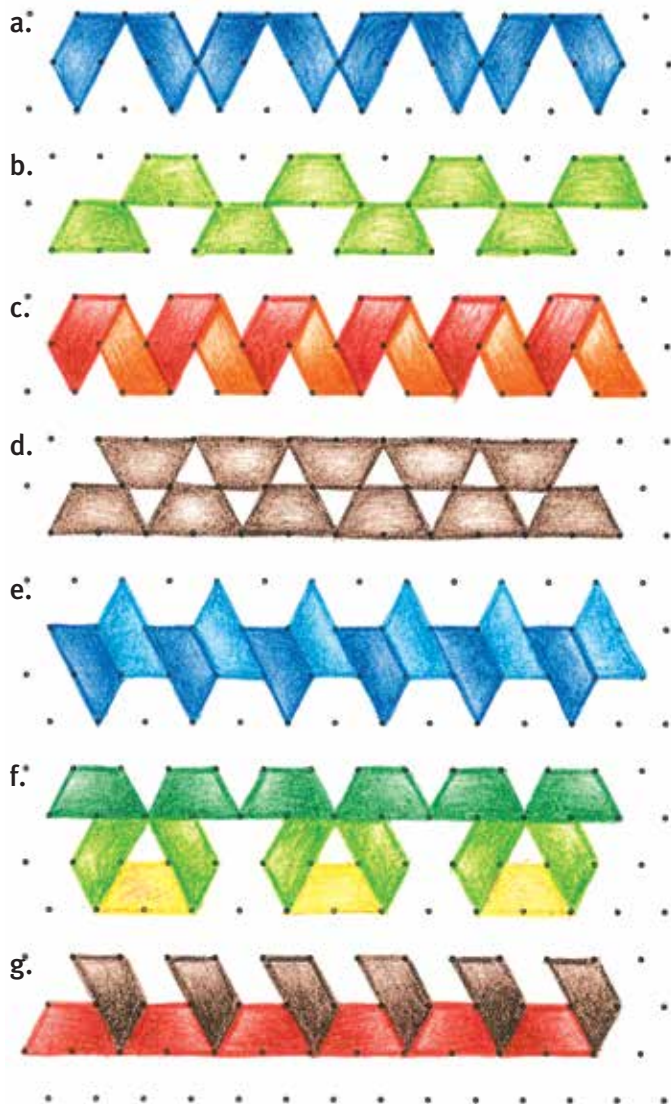# Shifting Shapes

You need: trapezium pattern blocks, isometric dot paper

**ACTIVITY**

1. Tania used a trapezium pattern block to make these designs, then copied them onto isometric dot paper. Describe each of them, using the language of transformations.

### The language of transformations

| Transformation | Details to give |
|---|---|
| Translation | Distance and direction |
| Reflection | Axis (mirror line) |
| Rotation | Centre, angle, and direction |

a.

b.

c.

d.

e.

f.

g.

2. Follow these instructions and draw the pattern:
   - Start with a trapezium lying on its longest side.
   - Rotate it 120 degrees clockwise about the bottom right-hand vertex.
   - Rotate it 120 degrees clockwise about the same vertex. Repeat.
   - Translate it 4 units to the right. Repeat the whole sequence twice.

3. Make a different strip pattern using the trapezium. Write a set of instructions for making it.