CHAPTER 14
Comparing Patterns

Charlie is designing a game board. He made 2 patterns by tracing a pattern block and using flips and turns.

How can Charlie compare the patterns?

I can use a chart to compare how the patterns are the same and how they are different.

<table>
<thead>
<tr>
<th></th>
<th>Pattern 1</th>
<th>Pattern 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes that are the same</td>
<td>shape: trapezoid</td>
<td>shape: trapezoid</td>
</tr>
<tr>
<td></td>
<td>colour: red</td>
<td>colour: red</td>
</tr>
<tr>
<td>Changing attributes</td>
<td>position of the block</td>
<td>position of the block</td>
</tr>
<tr>
<td>How the changing attributes change</td>
<td>flips</td>
<td>turns</td>
</tr>
</tbody>
</table>

I write a pattern rule for Pattern 1.

Pattern rule: Start with a trapezoid pattern block. Flip the block to the right each time.

A. Copy each pattern.
   Sketch the next 2 shapes in each pattern.
B. Write a pattern rule for pattern 2.

Goal

Checking

1. How are Charlie’s patterns the same? How are they different?

2. Charlie used slides, flips, and turns to make patterns 3 and 4.
   a) Compare the patterns using a chart like this one.
   b) Write a rule for each pattern.

<table>
<thead>
<tr>
<th></th>
<th>Pattern 3</th>
<th>Pattern 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes that are the same</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Changing attributes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How the changing attributes change</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reflecting

1. How are Charlie’s patterns the same? How are they different?

Practising

3. a) Create a new pattern with 2 changing attributes. Trace pattern blocks.
   b) Write a rule for your pattern.
4. a) Make a chart to compare your new pattern to one of the other patterns.
   b) How are the patterns the same? How are they different?
CHAPTER 14

Comparing Patterns

**Goal**

Check patterns by using slides, flips, and turns.

Charlie is designing a game board. He made 2 patterns by tracing a pattern block and using flips and turns.

**? How can Charlie compare the patterns?**

I can use a chart to compare how the patterns are the same and how they are different.

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<thead>
<tr>
<th>Attributes that are the same</th>
<th>Pattern 1</th>
<th>Pattern 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>colour: red</td>
<td>colour: red</td>
<td></td>
</tr>
<tr>
<td>Changing attributes</td>
<td>position of the block</td>
<td>position of the block</td>
</tr>
<tr>
<td>How the changing attributes</td>
<td>flips</td>
<td>turns</td>
</tr>
<tr>
<td>change</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I write a **pattern rule** for Pattern 1.

*Pattern rule:* Start with a trapezoid pattern block. Flip the block to the right each time.

**A.** Copy each pattern.

Sketch the next 2 shapes in each pattern.

**B.** Write a pattern rule for pattern 2.

1. How are Charlie’s patterns the same? How are they different?

**Checking**

2. Charlie used slides, flips, and turns to make patterns 3 and 4.
   a) Compare the patterns using a chart like this one.
   b) Write a rule for each pattern.

**Practising**

3. a) Create a new pattern with 2 changing attributes. Trace pattern blocks.
   b) Write a rule for your pattern.

4. a) Make a chart to compare your new pattern to one of the other patterns.
   b) How are the patterns the same? How are they different?