The Geometry of Traditional Baskets

Basket 1: Scallop Design Basket



Description: *This basket was woven around 1889 by a Coos weaver known as Katie, the wife of Ticky Tom. The light-colored design is made from beargrass, and the dark brown is made from roots. This basket design is today called a "scallop design"*

Look Closely

1. What shapes do you notice in this basket?
   - ☐ Rectangles
   - ☐ Triangles
   - ☐ Circles
   - ☐ Other(s): _____
2. Which shape appears most often? _____
3. Describe a repeating pattern you see. _____
4. What shapes or colors repeat in the design?

Pattern Math

Suppose a basket weaver creates a pattern with 4 triangles that repeats 6 times around a basket.

5. How many triangles would be in the design? _____

   Show your thinking.

   _____

   _____

Think Like a Weaver

6. Why might a weaver choose to repeat a pattern?

   _____

   _____

Basket 2: Multi-Design Basket



Description: *This basket was woven by Sarah Walker around 1859. It contains several different design patterns, including a design called "Medicine Mountain" along the bottom. The light-colored areas are woven with beargrass, and the dark areas are woven with roots.*

Look Closely

1. What shapes do you notice in this basket?
   - ☐ Rectangles
   - ☐ Triangles
   - ☐ Diamonds
   - ☐ Other(s): _____
2. How is this basket different from Basket 1? _____
   _____
3. How many different design patterns can you identify? _____
4. Which Pattern stands out most to you? _____

Pattern Math

This basket includes several bands of designs.

5. Which design appears to repeat most? _____
6. Suppose a basket has 5 triangles in one design group and the design group repeats 4 times. How many triangles are in the pattern altogether? _____
   Show your thinking. _____

Think Like a Weaver

7. Why might a basket weaver use more than one pattern in a basket?
   _____

Basket 3: Unknown Design Basket 1



Description: *This basket was made from roots and beargrass around 1896. The weaver's name was not recorded.*

Look Closely

1. What shapes do you notice in this basket?
   a. Rectangles
   b. Triangles
   c. Diamonds
   d. Other(s): _____
2. Which shape appears most often? _____
3. Describe one repeating pattern you see. _____
   _____
4. Where do you notice the pattern repeating? _____
   _____

Pattern Math

This basket shows a row of repeating triangles near the top.

5. Can you determine how many triangles go all the way around the basket? Circle: YES or NO Explain your thinking. _____
   _____
6. What additional information would help you solve the problem?
   _____

Think Like a Weaver

7. Why might a basket weaver continue a pattern all the way around a basket rather than stop it on one side? _____
   _____

Basket 4: Unknown Design Basket 2



Description: *This basket was woven from roots and beargrass in 1894. The weaver who made the basket is unknown. The basket is approximately 8 centimeters high, 31.5 centimeters long, and 10 centimeters wide.*

Look Closely

1. What shapes do you notice in this basket?
    a. Rectangles
    b. Triangles
    c. Diamonds
    d. Other(s): _____
2. Which shape appears most often? _____
3. Describe one repeating pattern you see. _____
    _____
4. Where do you notice the pattern repeating? _____
    _____

Pattern Math

The geometry design appears to repeat across the side of the basket.

- Estimate how many times the design repeats from one end of the basket to the other. My estimate: _____repeats.

Show your Thinking

Circle one:

- I counted visible pattern groups.
- I compared the design to the basket length.
- I used another strategy.
  Explain: _____
  _____

Think Like a Weaver

5. Why might it be helpful for a weaver to estimate how many pattern repeats will fit on a basket before beginning to weave? _____
   _____

Basket Design Display Sheet

MM

1.



2.



3.





4.