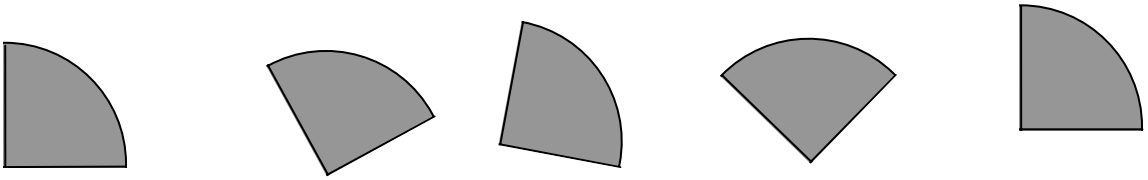
Fraction Counting Activities

Counting Fractional Parts Beyond the Whole

Materials:

- overhead projector
- fraction circles (templates in the Toolkit)

Using an overhead projector, show students a fourth of a circle. Ask students to tell the number of fractional parts needed to make the whole circle [4], and the name of each part ["fourth" or "quarter"]. Have students count fourths as you place fraction pieces on the overhead ["one fourth, two fourths, three fourths, four fourths, five fourths …"]



one fourth | two fourths | three fourths | four fourths | five fourths

After seven fourths are shown, ask: "Are there enough fourths to make one whole? … two wholes?"

Count other collections of fractional parts and have students regroup parts into wholes.

Following the activity, invite students to explain how they determined the number of fractional parts (e.g., fourths. thirds, fifths) that are needed to create 3 wholes.

Estimating Wholes

Materials:

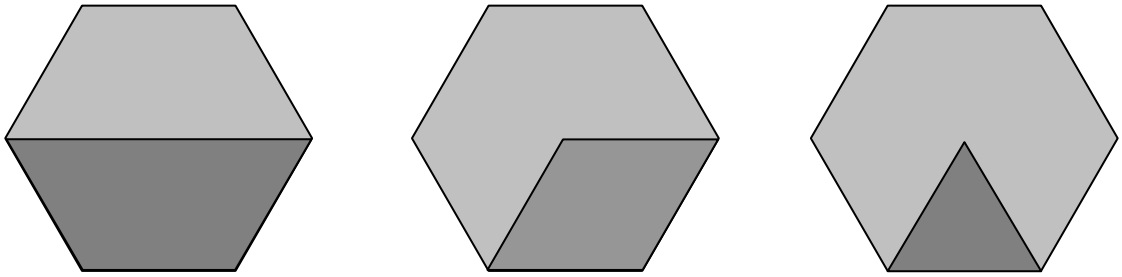
- pattern blocks

Prior to this activity, sort a collection of pattern blocks by separating the red trapezoids, blue rhombuses, and green triangles. Place each type of block in a separate container.

Ask students to find ways to cover a yellow hexagon pattern block with red trapezoids, blue rhombuses, and green triangles. Establish that the yellow hexagon can be covered with 2 red trapezoids, 3 blue rhombuses, or 6 green triangles. (The beige rhombuses and orange

squares do not cover the hexagon exactly.) Discuss the fractional relationship between the pattern block pieces:

- The red trapezoid is one half of the yellow hexagon.
- The blue rhombus is one third of the yellow hexagon.
- The green triangle is one sixth of the yellow hexagon.



Arrange students in pairs, and explain the activity.

- Students, in turn, take a handful of one kind of pattern block, and place the blocks between them and their partners.
- Together, the pair of students count the pattern blocks aloud (e.g., “one third, two thirds, three thirds, four thirds …”).
- The students estimate the number of wholes (hexagons) that can be formed with the pattern blocks.
- The students arrange the blocks into wholes (hexagons) to check their prediction.

Following the activity, invite students to explain how they made their estimate of the number of wholes that could be created using the pattern blocks.