

Just In Time Quick Check
Standard of Learning (SOL) 2.4b

Strand: Number and Number Sense

Standard of Learning (SOL) 2.4b

The student will represent fractional parts with models and with symbols.

Grade Level Skills:

- Name and write fractions represented by a set model showing halves, fourths, eighths, thirds, and sixths.
- Name and write fractions represented by a region/area model showing halves, fourths, eighths, thirds, and sixths.
- Name and write fractions represented by a length model showing halves, fourths, eighths, thirds, and sixths.
- Represent, with models and with symbols, fractional parts of a whole for halves, fourths, eighths, thirds, and sixths, using:
 - region/area models (e.g., pie pieces, pattern blocks, geoboards);
 - sets (e.g., chips, counters, cubes); and
 - length/measurement models (e.g., fraction strips or bars, rods, connecting cube trains).

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Supporting Resources:


- VDOE Mathematics Instructional Plans (MIPS)
 - [Cookie Fractions](#) (word)/[PDF](#)
 - [Pattern Block Fractions](#) (word)/[PDF](#)
 - [More or Less](#) (word)/[PDF](#)
- VDOE Word Wall Cards: Grade 2 ([Word](#)/[PDF](#))
 - Fraction: Half and Fourth
 - Fraction: Thirds
 - Fraction: Sixths
 - Fraction: Eighths

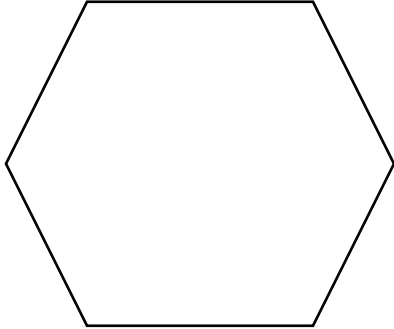
Supporting and Prerequisite SOL: [2.4a](#), [1.4a](#), [1.4b](#), [K.5](#)


SOL 2.4b - Just in Time Quick Check

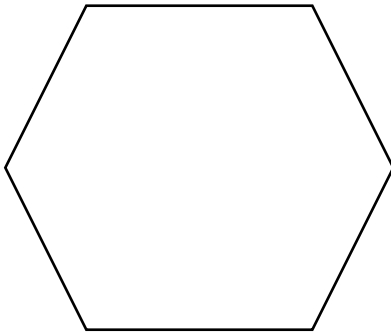
Each student will need seven equilateral triangles () (for example, green pattern blocks in which each triangle is one-sixth of the red hexagon) for the first activity. The triangles could be green triangle pattern blocks or paper triangles.

Each student will need five rhombi () (for example, blue pattern blocks in which each rhombus is one-third of the red hexagon) for the second activity. The rhombi could be blue pattern blocks or paper rhombi.

1. Use the triangles  to make a model that shows $\frac{4}{6}$. Then use the picture below to show the model you made.



2. Use the rhombi  to make a model that shows $\frac{2}{3}$. Then use the picture below to show the model you made.



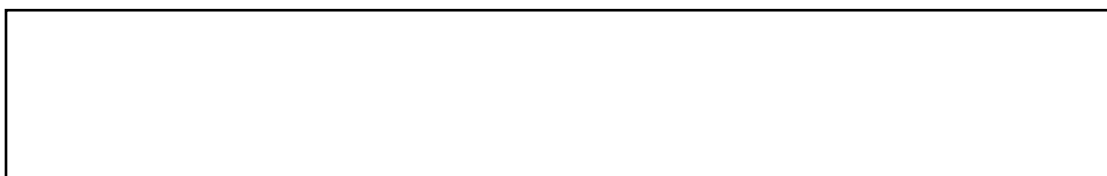
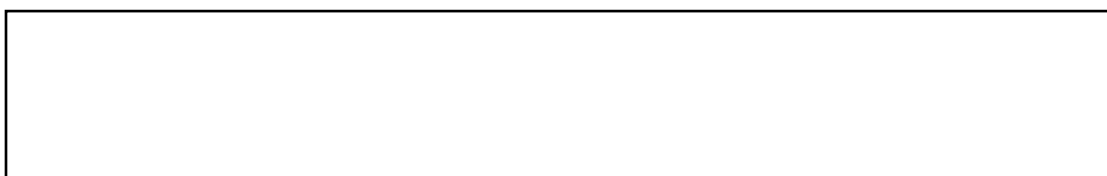
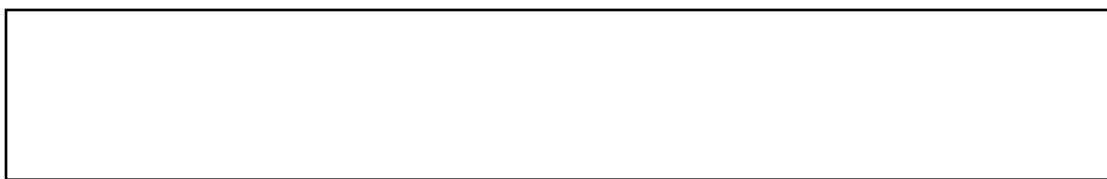
3. Cut out the paper strips at the bottom of this page. Then make a model for each fraction below by folding and shading in the fractional part. Glue or tape each model next to the fraction name.

a. $\frac{1}{2}$

b. $\frac{3}{4}$


c. $\frac{3}{8}$


Cut these out to make the paper strips:




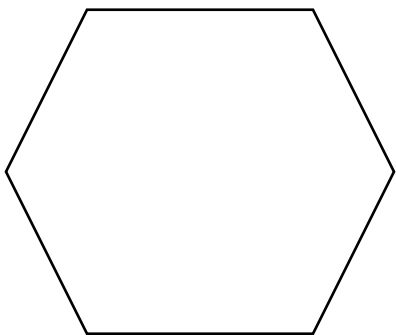
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Common Errors/Misconceptions and their Possible Indications

Each student will need seven equilateral triangles () (for example, green pattern blocks in which each triangle is one-sixth of the red hexagon) for the first activity. The triangles could be green triangle pattern blocks or paper triangles.


Each student will need five rhombi () (for example, blue pattern blocks in which each rhombus is one-third of the red hexagon) for the second activity. The rhombi could be blue pattern blocks or paper rhombi.

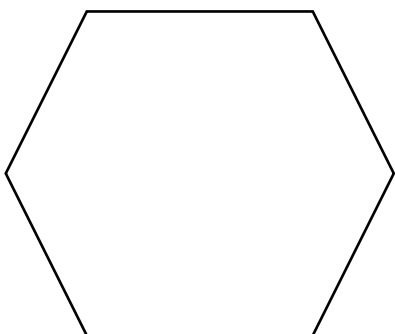
1. Use the triangles  to make a model that shows $\frac{4}{6}$. Then use the picture below to show the model you made.



Some students may not draw equal parts. These students would benefit from sorting figures that have been subdivided into parts that are equal and figures that have been subdivided into parts that are not equal, as well as engage in related discussions (e.g. "Both of these circles have 2 parts. The parts of the red circle are equal, so each part is one-half of the circle. The parts of the blue circle are not equal, so each part is not one-half of the circle.").

Students may confuse the numerator and the denominator. These students may shade in all 6 parts, or they may draw only 4 parts within the shape. Even though students are only provided with seven triangles, some students might draw ten parts, shading 4 parts and leaving 6 parts unshaded or adding extra parts outside the hexagon provided for them. These students may benefit from filling in shapes with pattern block pieces to see how they can represent halves, thirds, and sixths, and naming the fractions represented.

2. Use the rhombi  to make a model that shows $\frac{2}{3}$. Then use the picture below to show the model you made.



Students may not draw equal parts, which may indicate they do not understand that the fractional parts need to be the same size. Students may make three equal parts and shade in all 3 parts, or they may draw only 2 parts within the shape. Some students may use all five rhombi because of the 2 in the numerator and the 3 in the denominator, adding extra shapes outside the given hexagon. Using pattern blocks to fill in a hexagon that represents one whole (or fraction pie pieces in which a circle represents the whole) may help students develop these understandings, and making drawings to represent the fractions modeled during hands-on activities helps students develop conceptual understanding of the attributes in the models.

3. Cut out the paper strips at the bottom of this page. Then make a model for each fraction below by folding and shading in the fractional part. Glue or tape each model next to the fraction name.

a. $\frac{1}{2}$

Students may not fold equal halves because they do not realize that fractions have equal size parts within the whole. Students may fold the paper two times because of the denominator, creating fourths instead of halves. Explicit discussions about the number of folds or cuts needed to make the number of parts designated by the denominator are helpful for these students.

b. $\frac{3}{4}$

Students may not fold equal fourths because they do not realize that fourths are four equal size parts of the whole. If students do not recognize that the number 4 in the denominator is the number of equal parts in the whole, they may fold the strip into 3 parts for the numerator. These students may benefit from comparing different models for the same fraction (length/linear, area/region, set) and relating the representations to the numbers in the numerator and denominator of the fraction.

c. $\frac{3}{8}$

Students may not fold equal eighths because they do not realize that eighths are eight equal size parts of the whole. If students do not recognize that the number 8 in the denominator is the number of equal parts in the whole, they may fold the strip into 3 parts for the numerator instead.