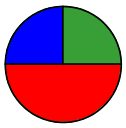
# Fractions – 3-Part – Pizza



## Math Learning Goals

- Activate and assess prior knowledge of fractions.
- Reason about fractions from a variety of perspectives and representations.

**Minds On.**

## Small Groups → Exploration/Presentation

How many ways can you show $5/6^{th}$?

((e.g., fraction strips, numberline, equivalent fractions, decimal, percent, pie/circle model, manipulatives – geometric shapes, etc.)

**Action!**

## Small Groups → Modelling

(in partners) Distribute fraction cards (BLM 5.1.1). Explain the task, including the presentation. Tell them that they are to use a variety of strategies and tools, including estimation, manipulatives, diagrams, anchors (of 0, $\frac{1}{2}$, 1), and equivalent forms (decimals, percents) to complete the task and include in their presentation.

Match groups as the complete the task. Two groups form a larger group to **discuss the strategies and tools they used and plan and make a presentation. (Students had difficulty finding equivalent fractions using the numebrs as given in the fraction strips (BLM 5.1.1) – change denominators to friendlier numbers**

Curriculum Expectations/Observation/Anecdotal Notes: **Observe students' comfort and facility with fractions to determine what fraction experiences are needed in this unit.**

**Debrief**

Consolidate

## Whole Class → Discussion

Gallery Walk

Post chart paper solutions around the room for students to view and comment on Consolidation Look fors:

- Equal fraction pieces (same area) can have different shapes.
- Equal fractions can be expressed in different ways.
- Key vocabulary (denominator, numerator, equivalent, mixed number, etc.)
- Fractions can be expressed with common denominators for addition.
- $\frac{n}{n} = 1$
- Fractions can be reduced when numerator and denominator share a common factor greater than 1.

*Reflection*

## Home Activity or Further Classroom Consolidation

Make a Think Sheet of things you remember about fractions. Include:

- terminology, e.g., *proper*, *improper, mixed number, numerator, etc.*
- how to add and subtract fractions using symbols
- how to represent fractions on a number line
- equivalent fractions
- comparing and ordering fractions
- simplifying fractions (lowest term)
- use word, numbers and diagrams to explain your work

**Materials**

- variety of manipulatives
- chart paper
- markers

BLM 5.1.1

## 5.1.1: Fraction Cards

Cut into vertical strips. This produces sufficient cards for four groups.

| | | | |
|---|---|---|---|
| $\frac{7}{16}$ | $\frac{7}{16}$ | $\frac{5}{12}$ | $\frac{5}{12}$ |
| $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{1}{2}$ |
| $\frac{13}{21}$ | $\frac{13}{21}$ | $\frac{5}{8}$ | $\frac{5}{8}$ |
| $\frac{2}{3}$ | $\frac{2}{3}$ | $\frac{3}{4}$ | $\frac{3}{4}$ |
| $\frac{7}{6}$ | $\frac{7}{6}$ | $\frac{23}{22}$ | $\frac{23}{22}$ |
| $\frac{6}{5}$ | $\frac{6}{5}$ | $\frac{22}{21}$ | $\frac{22}{21}$ |
| $\frac{7}{5}$ | $\frac{7}{5}$ | $\frac{23}{21}$ | $\frac{23}{21}$ |

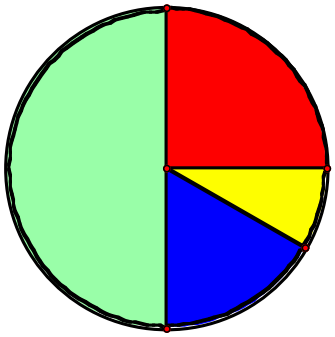
# 5.1.2: Fraction Stations ***Complete as a separate lesson (practice)

## Pizza Pieces

1. Use circular fraction pieces to create a model for a pizza that has been cut into pieces.

   On chart paper:
   - draw the model.
   - write an equation for the model.
   - show that the equation is true.

### Example:

| Draw the model. | Write the equation. | Show that the equation is true. |
|---|---|---|
|  | $\frac{1}{2}+\frac{1}{4}+\frac{1}{6}+\frac{1}{12}=1$ | $\frac{1}{2}+\frac{1}{4}+\frac{1}{6}+\frac{1}{12}$<br>$=\frac{6}{12}+\frac{3}{12}+\frac{2}{12}+\frac{1}{12}$<br>$=\frac{6+3+2+1}{12}$<br>$=\frac{12}{12}$<br>$=1$ |

2. Create different models using the same procedure.

   *Different models might have:*
   - *a small number of fraction pieces*
   - *a large number of fraction pieces*
   - *all fraction pieces the same size*
   - *some fraction pieces the same size and some pieces of different size*

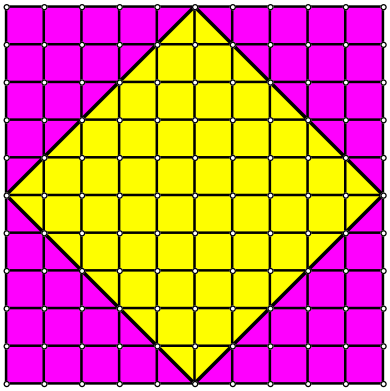
# 5.1.2: Fraction Stations (continued)

## Pieces of Cake

1. Create a geoboard model for one whole cake that has been cut into pieces.

   On chart paper:
   - draw the model.
   - write an equation for the model
   - show that the equation is true.

### Example:

| Draw the model. | Write the equation. | Show that the equation is true. |
|---|---|---|
|  | $\frac{1}{8}+\frac{1}{8}+\frac{1}{8}+\frac{1}{8}+\frac{1}{2}=1$ | $\frac{1}{8}+\frac{1}{8}+\frac{1}{8}+\frac{1}{8}+\frac{1}{2}$<br>$=\frac{4}{8}+\frac{1}{2}$<br>$=\frac{1}{2}+\frac{1}{2}$<br>$=1$ |

2. Create different models using the same procedure.

   *Different models might have:*
   - *a small number of pieces*
   - *a large number of pieces*
   - *the same size for all pieces*
   - *some pieces of the same size and some pieces of different size*