

# Cleaning Out the Candy Shop Investigation

CCSSm Alignment: 5.NF.7.

c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem.

Objective: Students will explore division of whole numbers and unit fractions, using different representations to make sense of the problems.

Mr. Elmer's Candy Shop has been the children of Anytown's favorite place to visit! Kids of all ages can fondly remember their first trip to the store, as well as the many special occasions when they were able to stroll up and down the aisles filling their goody bags with all sorts of yummy treats.

The children of Anytown were saddened to learn when Mr. Elmer decided to retire, close the Candy Shop and move to Hawaii. As a thank you to his customers, Mr. Elmer decides to open up the store and allow the children to fill their goody bags one last time.

Mr. Elmer will allow the children to fill their goody bags for FREE...if:

- The candy is shared among children; and
- The children can show Mr. Elmer how they shared the candy in at least two different ways.

Your task ...

Select one of each colored card and show how the candy was shared in AT LEAST TWO different ways. Be prepared to explain your representations.

Card Set 1a & 1b have partitive division situations (1a and 1b should be run on different colored paper)

Card Set 2a & 2b have measurement/quotative division situations (2a and 2b should be run on different colored paper)

Questions to ask during student presentations:

- How did you make sense of the problem?
- How does your representation relate to the problem?
- \*Ask to the whole class after the student shares their representation: What information were you able to find in their representation?
- Did anyone think about in a different way? Please share.
- \*After several students have presented, display their representations and ask: What are the similarities of these representations? the differences?

Continuation of Investigation....

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- a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.
- b. Interpret division of a whole number by a unit fraction, and compute such quotients.

Mr. Elmer was so excited about the success of his FREE candy event and the exciting thinking that the children of Anytown exhibited that he took a multitude of pictures with his new smart phone and posted them on The Candy Shop's website.

Your task:

Select a representation card and create a story context that matches the representation. Be prepared to discuss how you made sense of the representation.

Questions to ask during student presentations:

- How did you make sense of the representation?
- How does your story context connect to the representation?
- \*Ask to whole class: Does anyone have questions for our presenter?
- Did anyone create a different story context for this representation? Please share.
- \*After several story contexts are shared, ask: How do these different story contexts relate? How are they different?

As closure for the investigation, have students to create an additional representation of their story context.