

Overview of Class #7

- Overview of today and next two weeks
- Writing story problems for multiplication
- Representing fractions
- Candy Box Problem
- Discuss midterm exam
- Assignments

Story Problems for Multiplication

Using each of the interpretations of multiplication — repeated addition, area, and Cartesian product — write three story problems for each of the following:

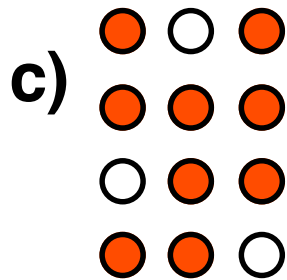
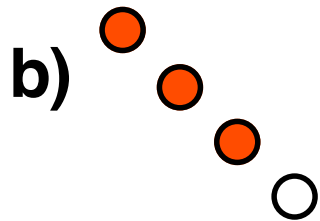
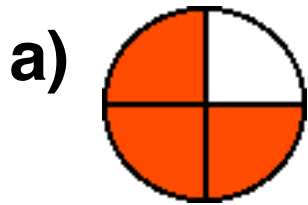
$$5 \times 7$$

$$.5 \times 7$$

Examining Representations

For each one:

- a) Could this represent $\frac{3}{4}$?
- b) If yes, explain how it could represent $\frac{3}{4}$. If no, explain why it could not represent $\frac{3}{4}$.

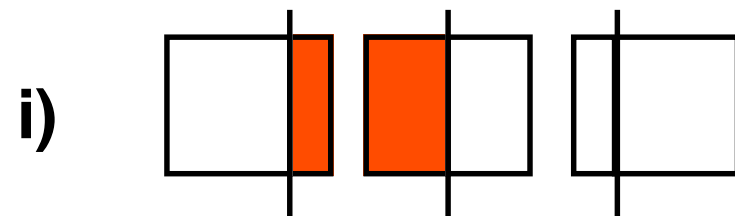
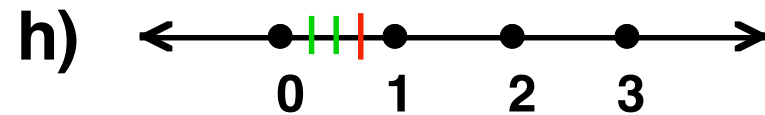


d) How many 4's are there in 3?

e) 18 crayons out of a box of 24

f) .75

g) I want to share 3 bottles of soda equally among 4 people. How much will each person get?



Candy Box Problem

There was a box of candy on the table. Alyson was hungry because she hadn't had breakfast, so she ate half the candy. Then Rob came along and noticed the candy. He thought it looked good, and had not packed a lunch, so he took two-thirds of what was left in the box. Jessica came by and decided to take three-fourths of the remaining candies with her to her next class. Then Lani came dashing up and took one piece of candy to munch on. When Lee looked at the candy box, he saw that there was just one piece of candy left. "How many pieces of candy were there in the box to begin with?" he asked Alyson suspiciously.

Next Tasks

Choose one of these to work on now:

1. If there is one that you are on stuck on, try to figure out whether and how it can work.
2. Is the answer unique? Is there another answer?
3. Are there approaches other than the ones your group members have done?
4. Are there ways to map the correspondences among apparently different solution methods?

Midterm Exam

- Many strong aspects of your work
 - Often had the gist of the ideas
- But some pervasive problems:
 - Casual language, lacking clarity or precision
 - Mathematical misconceptions or errors
- This is a test we expect everyone to be able to do, unlike tests you might be used to in math classes.

Midterm Exam (continued)

- Do NOT calculate a percentage based on your points. Instead, figure out what you did not understand and work on it.
- We graded hard to communicate clearly what counts as a complete enough answer and to help develop high standards for mathematical explanation and ideas.
 - Your grade will likely not reflect your initial work on the exam.
 - Anyone can redo Questions 2, 4, or 5 for credit. We will help you. (Some people may not even have scores calculated for some questions.)
- Another conclusion we drew was that we did not teach some things well enough. We drew ideas from the midterm that will shape daily in-class math workouts for the next week.

Wrap Up and Assignments

- Midterm revisions due Friday at 5 p.m.
- Partner assignments due Friday at 5 p.m.
- Individual assignments due Tuesday (designed to prepare for class tomorrow)
- Reminder: If you have questions or concerns, please talk to us