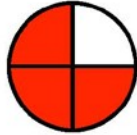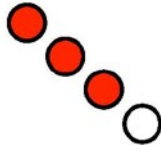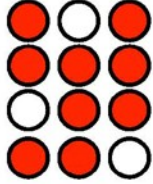## Overview of Session 3

- Connecting representations of fractions
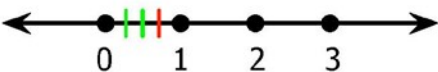- Developing a working definition of a fraction

1

a)

b)

c)

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?

h)

i)

2

Connecting representations task

- Make connections between two of the representations from the ¾ activity
- Articulate connection between the pair of representations as if talking to a student and connect the pair back to the idea of ¾

3

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MATHEMATICS

Making connections with representations

- Between student(s) thinking and a representation
  - Explanation related to a particular aspect of a diagram
- Within representations of the same type
  - Rectangular area models
- Across representations of the same type
  - Rectangular area and circular area
- Across representations of different types
  - Measurement model and area model
- Between representation and the problem statement
  - Checking on the correspondence of what a problem asks and features of a representation
- Connecting mathematical language and ideas to representations
  - Using subject matter terminology and ideas to name and describe aspects of representations

4

A working definition of a fraction

– Identify the whole

– Make d equal parts

– Write $^1/_d$ to show one of the equal parts

– If you have d of $^1/_d$, then you have the whole

– If you have n of $^1/_d$, then you have $^n/_d$

• n and d are whole numbers

• d ≠ 0

5

Summary

In this session, you continued to work on:

- The mathematics used in elementary teaching
    - Articulating key ideas about fractions
    - Formulating and analyzing definitions
- Teaching practices used to help elementary students learn mathematics
    - Making connections across representations in order to further understanding
- Considering the benefits of using multiple representations in the classroom

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