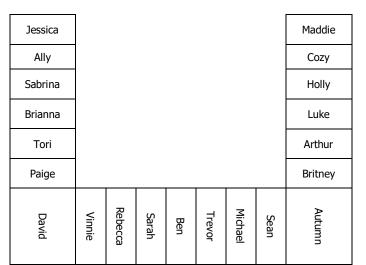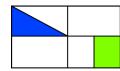# Transcript: Summarizing the Discussion

Elementary Mathematics Laboratory for incoming fifth graders
Park City Mathematics Institute
Tuesday, July 11, 2006

Seating Arrangement

Jessica								Maddie
Ally								Cozy
Sabrina								Holly
Brianna								Luke
Tori								Arthur
Paige								Britney
David	Vinnie	Rebecca	Sarah	Ben	Trevor	Michael	Sean	Autumn

Problem:

What fraction of the big rectangle is the blue region?

What fraction of the big rectangle is the green region?

Line	Speaker	Text
1–9	Teacher:	Alright, let's try to summarize what we've done so far. There were a lot of different kind of good explanations there and I think people are watching each other a little bit more closely today, so that's good. So, here are some things that we've done so far and then we're gonna try a few more fraction problems. One thing we started yesterday that we're doing more today is being careful about what we're calling the whole.
10–12		David and Vinnie, I'm gonna move you guys apart if you talk when we're in whole group, okay? Okay, just, keep your eyes up here right now.
13–28		So one thing we talked about is being careful about the whole, and that came up here because I wanted you to think of this as the whole. (*Points to the big rectangle*). But then Ally did a nice job of looking at different wholes and then putting it back together. So she still kept her eye on the original big rectangle. Then a thing we made much more clear yesterday is that we're interested in dividing wholes into equal parts. We didn't use the word equal very much at first, and today I hear people talking about equal much more. Everyone who explained talked about equal parts. Another thing we started to talk about yesterday was that what we name the equal parts comes from the number of equal parts we make. Remember how we were practicing yesterday? Like if you make five equal parts you would call them?
29	Students:	Fifths.
30–31	Teacher:	Fifths. And if you make twelve equal parts you would call them?
32	Students:	Twelfths.
33–34	Teacher:	Twelfths. What if there were eighteen equal parts, what would you call one of them?

35	Students:	Eighteenths.
36	Teacher:	Eighteenths. So now there's one more thing I think
37		we wanna add to this and then we're gonna try a little
38		later today to see if we can put down a definition of
39		what a fraction is so that we can always be much
40		more clear about them. So another thing we wanna
41		say is that if we have, let's say, in this case, an-
42		here's an eighth. (*Points to blue region*). One thing
43		you haven't quite said that I want you to think about
44		is if we made eight copies of this- this triangle- what
45		could we do with them? What if I made eight copies
46		of this blue triangle right here? What could I do with
47		it? Ally, what could- No, not sure? Okay Sean, what
48		could I do with it?
49	Sean:	Fill in the whole big rectangle and have
50	Teacher:	I could-
51	Sean:	one remaining.
52	Teacher:	I interrupted you, go ahead. Fill in the whole what?
53	Sean:	Rectangle, and then since you made eight copies
54		there'd be one remaining.
55	Teacher:	Yes, if I take eight copies of this one-eighth, I can fill
56		in the whole rectangle. So when we talk about- Luke
57		and Art- when we talk about, like, one-eighth or one-
58		fifth or one-twelfth that means we can make that
59		many copies of it and fill in the whole again. So,
60		what if I have one-half, how many copies do I have
61		to make to fill in the whole? Rebecca?
62	Rebecca:	Two?
63	Teacher:	Two. What if I have one-fourth? How many copies
64		do I have to make to fill in the whole? Vinnie? If I
65		have one-fourth of a shape, or one-fourth of
66		something
67	Vinnie:	Four.
68	Teacher:	how many copies would I have to make?
69	Vinnie:	Four.

70	Teacher:	Four. Okay so now we're gonna go on and try a
71		couple more fraction problems together and then I'm
72		gonna ask you a couple of hard ones to do by
73		yourself. So the next thing I wanna check is- moving
74		on, and think about eighths in some different ways
75		because they're- this is one way to show an eighth,
76		and here's another way to show an eighth. Those
77		have different shapes but you both- you agree that
78		they were both one-eighth, right?