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

July 11, 2006:

Problem:



What fraction of the big rectangle is the blue region?

What fraction of the big rectangle is the green region?

1 Teacher:

3

5

29

19 20

21

26

Fifths.

Teacher:

Students:

Fifths. And if you make twelve equal parts you would

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 vesterday that we're doing more today is being

careful about what we're calling the whole. 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. So one thing we talked about is

because I wanted you to think of this as the whole.

being careful about the whole, and that came up here

(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

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

yesterday is that we're interested in dividing wholes into equal parts. We didn't use the word equal very much at

call them?

Students: Twelfths.

Teacher: Twelfths. What if there were eighteen equal parts, 31 32

parts you would call them?

what would you call one of them?

Eighteenths. Students:

Eighteenths. So now there's one more thing I think we 34 Teacher: wanna add to this and then we're gonna try a little later

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36 37 38 39 40 41 42 43 44 45		today to see if we can put down a definition of what a fraction is so that we can always be much more clear about them. So another thing we wanna say is that if we have, let's say, in this case, an-here's an eighth. (<i>Points to blue region</i> .) One thing you haven't quite said that I want you to think about is if we made eight copies of this- this triangle- what could we do with them? What if I made eight copies of this blue triangle right here? What could I do with it? Ally, what could-No, not sure? Okay Sean, what could I do with it?	72 73 74
46	Sean:	Fill in the whole big rectangle and have	
47	Teacher:	I could-	
48	Sean:	one remaining.	
49	Teacher:	I interrupted you, go ahead. Fill in the whole what?	
50 51	Sean:	Rectangle, and then since you made eight copies there'd be one remaining.	
52 53 54 55 56 57 58	Teacher:	Yes, if I take eight copies of this one-eighth, I can fill in the whole rectangle. So when we talk about- Luke and Art- when we talk about, like, one-eighth or one-fifth or one-twelfth that means we can make that many copies of it and fill in the whole again. So what if I have one-half, how many copies do I have to make to fill in the whole? Rebecca?	
59	Rebecca:	Two?	
60 61 62	Teacher:	Two. What if I have one-fourth? How many copies do I have to make to fill in the whole? Vinnie? If I have one-fourth of a shape, or one-fourth of something	
63	Vinnie:	Four.	
64	Teacher:	how many copies would I have to make?	
65	Vinnie:	Four.	
66 67 68 69 70 71	Teacher:	Four. Okay so now we're gonna go on and try a couple more fraction problems together and then I'm gonna ask you a couple of hard ones to do by yourself. So the next thing I wanna check is- moving on, and think about eighths in some different ways because they'rethis is one way to show an eighth and here's another	

way to show an eighth. Those have different shapes but you both- you agree that they were both oneeighth, right?