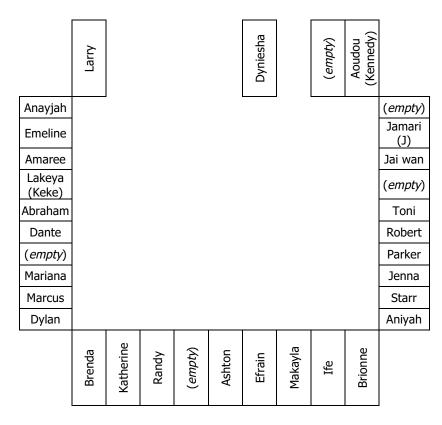
Elementary Mathematics Laboratory University of Michigan School of Education Tuesday, August 5, 2014

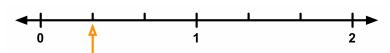




August 5, 2014:

Students have worked independently on the number line problem shown below. The discussion starts with the teacher eliciting from students the incorrect answers that younger children would likely give. The clip starts at the point that the teacher asks students to explain what they believe the answer to be.

What number does the orange arrow point to? _



Explain how you know.

1 2 3	Teacher:	Who would like to try to explain what you think the answer is? And show us your reasoning by coming up to the board?
4 5 6		Who'd like to come up to the board and try to tell- And you know, it might not be right. That's okay because we're learning something new.
7 8 9		I'd like someone to come up and sort of be the teacher and explain how you are thinking about it. Who'd like to try that this morning?
10 11		Okay, Aniyah? When someone's presenting at the board, what should you be doing?
12	Students:	Looking at them.
13	Teacher:	Looking at that person- Uh-huh?
14	Aniyah:	You want me to write it?
15 16	Teacher:	You're trying to mark what you think this number is and explain how you figured it out.
17 18 19		Listen closely and see what you think about her reasoning and her answer. (Aniyah writes $^1/_7$ by the orange line).
20	Aniyah:	I put one-seventh because there's-
21	Toni:	Did she say one-seventh?
22 23 24	Aniyah:	Yeah. Because there's seven equal parts, like one, two, three, four, five, six, and then seven. (<i>Uses her fingers to count the parts on the number line</i>).
25 26 27	Teacher:	Before you agree or disagree, I want you to ask questions if there's something you don't understand about what she did.

28 29 30 31	No agreeing and disagreeing. Just- All you can do right now is ask Aniyah questions. Who has a question for her? Okay, Toni, what's your question for her?	59 60 61 62 63	Dante:	So, if it's at the zero, how did you know that if like if I took it and put it at the- Hold on. Which line is- What if it didn't like- What if the orange line wasn't there, and you had to put it where the one is? What if the orange line wasn't there? And how would you still know
32 Toni:	Why did-	64 65	65	it was one-seventh to put it where the orange line is now? I don't know.
33 Teache	: Go ahead, it's your turn.	66		
34 Toni:	Why did you pick one-seventh?		Teacher:	Okay. Does everyone understand how Aniyah was
35 Studen	: You did not.	67 68	reacher.	thinking?
36 Teache 37	question. Can you show us again how you figured that-	69	Student:	Yes.
38	why you decided one-seventh?	70 71	Teacher:	Yes? Okay. You can sit down now. We're going to try to get people to comment. Do you want to take
39 Aniyah:	First, I thought it might be seven because there's seven	72		comments up there? Would you like to stand there and
40	equal parts.	73 74		take the comments, or do you want to sit down and listen to the discussion?
41 Teache	Did you write one-seventh? I can't see very well from here.	75	Teacher:	What would you prefer?
43 Aniyah	Uh-huh. Yes.	76	Aniyah:	Sit down.
44 Teache	: Yes? Okay.	77	Teacher:	Sit- You'd like to sit down? Okay.
45 46 47 48 49	Okay, anymore questions for Aniyah? In a moment, we're going to talk about what you think about her answer, but first, are there any more questions where you're not sure what she said, or you'd like to hear it again or something like that? Lakeya?			
50 Lakeya	If it start at the- Oh.			
51 Teache	: Talk to her, please.			
52 Lakeya	If you start at the zero, how did you get one-seventh?			
53 Aniyah 54	Well, I wasn't sure it was one-seventh, but first, I thought that the seven equal parts.			
55 Teache	: Okay, would some- You'd like to ask another question, Dante?			
57 Dante:	Yeah.			
58 Teache	: Yes, what?			