| Description: Discussion of Meredith's Number Line |
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| Model (clip 2 of 4) |
| Parent Tape: Number Line Models and Placing Numbers |
| on the Big Number Line |
| Date: 1993-11-10 |
| Location: Colts Neck Elementary School |
| Researcher: Professor Carolyn Maher |

Transcriber(s): Yankelewitz, Dina
Verifier(s): Reid, Adrienne, Farhat, Marcelle
Date Transcribed: Spring 2009
Page: 1 of 7

| Line | Time | Speaker | Transcription |  |
| ---: | :--- | :--- | :--- | :--- |
| 1. |  | RT1 | I thought that it was kind of a neat way to do it. It was different from what <br> anybody else did. But, I still had a question. You sort of got at my question a <br> little bit, but I am not quite sure. Erik, you were going to say something? |  |
| 2. |  | Erik | Well, see, if someone was to look at this for the first time, on the third number <br> line, for the first time, I know when I did I got confused because I thought that in <br> the middle of the section where she put the one third, two thirds and three thirds. <br> I thought that, that, is where they would be. So that's why. I think that is what <br> Michael did, too. So, that is why he asked the question. |  |
| 3. |  | RT1 | How many of you thought that? |  |
| 4. | Students | [Two students in the camera view raise their hand.] |  |  |
| 5. |  | RT1 | How many of you did not think that? |  |
| 7. | Students | [Four students in the camera view raise their hand.] |  |  |
| 8. | RT1 | So, we all looked at it differently. Jessica? |  |  |
| 9. | Jessica | I think what Erik means is that he thought Meredith was making a whole new <br> number line; like, she thought two thirds was the half. |  |  |
| 10 |  | Erik | Yeah. It looks confusing. |  |
| 11 |  | Students | But that was not what she was doing, was she? | No. |
| 13 |  | RT1 | No. Alan what were you going to say? |  |
|  | Alan | The way I thought, when you divide it up into fractions then you have a line <br> going to the fraction, but Meredith just put the fractions above the number line <br> without the line, so that meant she was labeling the area. |  |  |


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| :--- | :--- |
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| Parent Tape: Number Line Models and Placing Numbers | Date Transcribed: Spring 2009 <br> on the Big Number Line <br> Date: 2 of 7 |
| Location:-11-10 Colts Neck Elementary School |  |
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| 14 | RT1 | Okay, now in the particular region over here, she has two thirds in this region, see where I am pointing? |  |
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| 15 | Students | [Murmur.] Yes. |  |
| 16 | RT1 | Between the one third and the two thirds, in that region represent two thirds of the line? |  |
| 17 | Erik | It represent one third. |  |
| 18 | RT1 | OK, it represents one third; How do you know that? |  |
| 19 | Erik | [walks to board] Because the way you said that one segment. Well, if you use both those segments like the segment here to here, that would be two thirds, but you said the segment here. It would be the two thirds the segment, but it would be only one segment. |  |
| 20 | RT1 | Could you show me what represents two thirds, what part of that line represents two thirds? |  |
| 21 | Erik | Right to there. That would represent two thirds. |  |
| 22 | RT1 | What do you think? |  |
| 23 | Students | [Murmurs.] That is true. |  |
| 24 | RT1 | How many of you agree with that? |  |
| 25 | Students | [Two students on camera raise hand. Some murmur right.] |  |
| 26 | Alan | [Stands up and walks to overhead.] Right, but what I think Meredith was trying to do was, you see how it had one third and the one third being here. She was saying that she was labeling this to be the second third of <br> the line and labeling this to be the third, third of the line. | Al.g |


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| Parent Tape: Number Line Models and Placing Numbers | Date Transcribed: Spring 2009 <br> on the Big Number Line <br> Page: 3 of 7 |
| Date: 1993-11-10 |  |
| Location: Colts Neck Elementary School |  |
| Researcher: Professor Carolyn Maher |  |


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| 27 |  | RT1 | Okay, so where would you put three over three, where would you write that <br> number if you were to write it on the number line? |  |
| 28 |  | Alan | You are doing it the way Erik's talking about it, you would <br> put one third over that area and you would put two thirds in <br> that area and three thirds in that area, because this would be <br> representing one third, <br> both of those would be two thirds and <br> three of those would be three thirds. |  |
| 29 |  | RT1 | Ok, so if you were to put the number three thirds on the line? I see over here the <br> numbers zero, one third, two thirds, and one.. Where would you put three thirds? |  |
| 30 |  | Alan | If you put three thirds, you would put it just in that big area because it would be... |  |
| 31 |  | Erik | [Erik points to 1 on overhead and murmurs $]$ No, you wouldn't. It would be right, <br> there. |  |
| 32 |  | Alan | Right, that would be the mark of the three third, but all three of those are the <br> three thirds. |  |


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| Parent Tape: Number Line Models and Placing Numbers |  |
| on the Big Number Line | Date Transcribed: Spring 2009 <br> Page: 4 of 7 |
| Date: 1993-11-10 |  |
| Location: Colts Neck Elementary School |  |
| Researcher: Professor Carolyn Maher |  |


| 33 |  | Erik | Meredith is saying right here that three thirds is right here, she says that is one, <br> three thirds in her perspective would be right here [Erik points to area above two <br> thirds.]. |  |
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| 34 |  | Meredith | No. |  |
| 35 | RT1 | No. Let us hear what Meredith has to say. |  |  |
| 36 | Erik | But ... |  |  |
| 37 | RT1 | Let us hear what Meredith has to say. |  |  |
| 38 |  | Meredith | As I did over here, I am saying this area here is three thirds. |  |
| 39 | Erik | I know; but, if someone were to look at this for the one time, they would think <br> that would be one whole and that would be three thirds, because you did not <br> label. You should label one whole and under it put three thirds. |  |  |
| 40 | RT1 | But, I did hear Meredith say that this piece is three thirds, did you mean that <br> Meredith? |  |  |
| 42 |  | Meredith | Yeah, this whole entire piece right here [Points to overhead]. |  |
| 43 |  | Meredith | You mean that? |  |
| 44 | Erik | And another thing Alan said ... |  |  |
| 45 | Alan | Well, that is why I said ... |  |  |
| 46 | Erik | [Points to overhead] I agree that would be the first piece. <br> That is the second piece. |  |  |
| But, together they make two-thirds. |  |  |  |  |


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| Parent Tape: Number Line Models and Placing Numbers | Date Transcribed: Spring 2009 <br> on the Big Number Line <br> Page: 5 of 7 |
| Location: Colts Neck Elementary School |  |
| Researcher: Professor Carolyn Maher |  |


| 47 | RT1 | And what makes three thirds? |  |  |
| ---: | :--- | :--- | :--- | :--- |
| 48 | Alan | Entire thing ... |  |  |
| 49 |  | Erik | [Points to overhead $]$ Three thirds would be the entire thing, it would go right <br> here, if this is the third one third segment. |  |
| 50 |  | Alan | Right, that is just representing the three-thirds. |  |
| 51 | Erik | That's what I was talking about Alan, I am talking about, one section is one third, <br> one section is two thirds like what Meredith said, they are separate, when you put <br> them together they are two thirds. |  |  |
| 52 |  | RT1 | Ok. Ok, let's hear from what other people are thinking. Brian? |  |
| 54 |  | I know what Meredith is trying to say. She is trying to say-to label-between <br> it, because if someone said-if someone looks at it-and they did not know a <br> thing about a number line, they would probably think that the one third would be <br> between the one third and two thirds, that is why she labeled it also in the middle, <br> because if someone saw it and did not know what a number line was, they would <br> probably think one third is between the one third mark and the two third mark, so <br> she is just labeling it in the middle to make it less confusing. |  |  |
| 55 |  | RT1 |  |  |
| 56 | Amy and | Ok, Amy and Jakki, you were going to say something? <br> [Murmur no off camera.] | RT1 <br> Jot going to say any more? Ok. Any one else have a comment? Ok, let me ask <br> you .... You have a comment, yes, Mark? |  |
| 57 |  | Mark | [Walks to overhead and points] I agree with Bryan because if no one ever saw a <br> number line, they would think that this was one third |  |


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| Pocation: Colts Neck Elementary School 7 <br> Researcher: Professor Carolyn Maher |  |


| 58 |  | RT1 | Ok, mathematicians conventionally, what they do so that people are not confused <br> they kind of agree to a way to mark those numbers on the line, they have a <br> common way to agree. And, the common way to agree, you can see here that we <br> have a big number line, we take it apart in a minute, but you see where we put our <br> numbers, we place them where Meredith placed them. That is the way <br> Mathematicians do it, and if you want to know where those numbers go you <br> usually look on the bottom of the line, ok, and that sort of helps us understand the <br> why we have the notation. Alan? |  |
| ---: | :--- | :--- | :--- | :--- |
| 59 |  | Alan | We could do that so that we could represent one half, two thirds, and <br> three thirds in pieces. [Alan walks to the board. RT1 looks for a fresh <br> transparency and marker. Alan begins to write.] Here is one way to <br> do it. Now, here would be one mark, two marks. Now, you could <br> could take out one of those pieces and say it is one third. And, then <br> you could take out another piece this long and you could put two third <br> And, then you could use the entire number line and say it three thirds |  |
| 60 |  | RT1 | Uhat do you think, you like that? |  |
| 61 |  | Students | [Room is silent.] |  |
| 62 |  | RT1 | How many of you like that? <br> [Seven students on camera raise their hands.] |  |
| 63 |  | Students | How many had questions about? |  |


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Verifier(s): Reid, Adrienne, Farhat, Marcelle
Date Transcribed: Spring 2009
Page: 7 of 7

| 67 | Alan | [Alan makes a new line on overhead and labels it underneath accordingly.] |  |
| :--- | :--- | :--- | :--- |
| 68 | RT1 | What about zero? |  |
| 69 | Alan | [Alan writes a '0' on the number line accordingly.] Zero would be put here. |  |

