Description: Clip 3 of 4, Erik justifies a train model for one third Parent Tape: Building Large Models to Show Equivalence: An Exploration (classroom view) Date: 1993-10-07 Location: Colts Neck Elementary School Researcher: Professor Carolyn Maher	Transcriber(s): Yankelewitz, Dina Verifier(s): Yedman, Madeline Date Transcribed: Spring 2009 Page: 1 of 4

9.2.345	Erik:	They did the same model. Ok, this is what you do. You do three oranges, you do actually you do three oranges and two purples. Three oranges
9.2.346	Alan:	Four oranges
9.2.347	Erik:	Three oranges!
9.2.348	Alan	Ok
9.2.349	Erik	Three oranges and two purples.
9.2.350	Alan:	Two purples would just be a brown.
9.2.351	Erik:	An then… a brown? No it wouldn't, yeah it would, and then you could make a train for the thirds. [talk about whose mat is who's] Ok, and then the browns, two browns would make a train for one third
9.2.352	Alan:	Right,
9.2.353	Erik:	And then,
9.2.354	Alan:	Woo, woo, woo, woo
9.2.355	Erik:	And then two more browns would make another train for thirds. One, two, I know. No, wait, no, it wouldn't be browns, it would be blacks.
9.2.356	David:	Could I just do what I was thinking of? Could I just
9.2.357	Erik:	No they're not, look, it'd be blue and a purple or a blue and a
9.2.358	David:	Could I just make something?
9.2.359	Alan:	Hey you're robbing me.
9.2.360	Erik:	Everyone's robbing you, remember?
9.2.361	David:	Could I have some
9.2.362	Erik:	Me and David will work together.
9.2.363	David:	Could I have some?
9.2.364	Meredith:	I'm working with Erik.
9.2.365	David:	Can't I just use some of the blocks over there? I brought it over Meredith.
9.2.366	David:	Can I have some?
9.2.367	Alan:	Check it out
9.2.368	Erik:	No, I'm just kidding
9.2.369	Alan:	Check it out.
9.2.370	Erik:	Now divide it into thirds
9.2.371	Alan:	Hmmm
9.2.372	Erik:	You can't
9.2.373	Meredith:	I have and idea.
9.2.374	Alan:	Wow, something just popped into my head
9.2.375	Erik:	Me too
9.2.376	David:	Something just popped into my head.
9.2.377	Alan:	The bigger you make the model, you can't third it.

9.2.378	Erik:	No no no no no, can I have these?
9.2.379	Alan:	[continuing] You can't third something like this. You'd need colossal rods.
9.2.380	Erik:	Like the ones over there?
9.2.381	David:	I know something, alright?
9.2.382	Alan	Impossible. That'd just like one dark green.
9.2.383	David	Can I um do something?
9.2.384	Erik:	Hold on, let me do something [start fighting over rods] Could I have the blue
9.2.385	Alan:	Erik! You can't third that big orange model.
9.2.386	Erik:	You want to make a bet? I bet I can.
9.2.387	Alan:	You can't
9.2.388	Erik:	I bet I can. Oranges
9.2.389	Alan:	Because if you use more. Using oranges, if you use three oranges, you won't be able to third it. You won't be able to third it!
9.2.390	Erik:	This is what I was thinking. One, two three. Oh contraire… It needs to be, let's see, how much smaller?
9.2.391	Alan:	Look you can't third it, you fourthed it but you can't third it.
9.2.392	Erik:	Ok, let's see, four one two, easily how you can do it.
9.2.393	Alan:	Third it then.
9.2.394	Erik:	What?
9.2.395	Alan:	Third it then.
9.2.396	Erik:	What do you mean?
9.2.397	David:	Who took my thirds? I was using them.
9.2.398	Erik:	Me! I think, no it wasn't me. It was Alan.
9.2.399	Alan:	Make three blues and train it. Then you could use those
9.2.400	Erik:	What do you think I was thinking of? Give me my rods back. Stop!
9.2.401	David:	Meredith, can I have my rods? I brought them over.
9.2.402	Erik:	Alan, you're stealing from, no no no, Alan you're stealing from us! No.
9.2.403	Meredith:	Oh, oh! Did you just take one of my blues
9.2.404	Alan:	No
9.2.405	Erik:	Yeah. And for the thirds the thirds can easily be done by the blues
9.2.406	David:	I have an idea.
9.2.407	Erik:	I've got a good idea.
9.2.408	David:	I've got a better idea.
9.2.409	Erik:	The thirds, and then how much room do we have left? We have one blue left which is nine. One two three four five six seven eight nine.
9.2.410	David	Just listen out.
9.2.411	Meredith:	Me need a brown rod

9.2.412	Erik:	It all works out.
9.2.413	Alan:	You know what you could try? Use three blues and the light green then use the oranges to third it then you could fourth it easily
9.2.414	Erik:	Now.
9.2.415	David:	I already have a third. See just put down the purple and I took off the green. Here's what I made.
9.2.416	Alan:	Look it. [to Meredith] You have any blues?
9.2.417	Erik:	Yeah but she's not going to give them to you.
9.2.418	Alan:	And the light green. Easily your thirds can be used.
9.2.419	Erik:	Perfect, I did it! Hello Alan, I did it!
9.2.420	Alan:	You fourthed it too?
9.2.421	Erik:	Yup! One two three four
9.2.422	Voice:	Can you third that?
9.2.423	Erik:	I thirded it. One two three and then plus nine other of those, which would be one two three four five six seven eight nine. So it's just like making a new rod.
9.2.424	Alan:	Fourthing it might be.
9.2.425	Voice:	Can you run it by me again? I'm not quite following that.
9.2.426	Erik:	Ok. I have the three of 'em, and then I put nine other ones which would equal another blue, so if I thirded it, I would add one to there, one to there, and one to there, which would be three. And then four five six seven eight nine. So it's like adding another blue, but I'm making a new rod. [Erik's model is -Three orange rods and a dark green rod, a train of four blue rods, and a train of three blue rods and nine white rods]
9.2.427	Voice:	Ok, can you set that up in a different way?
9.2.428	Erik:	Well, in thirds
9.2.429	Voice:	Use the same pieces, but can you set it up a little differently?
9.2.430	Meredith:	Oh, I have an idea, put the three next to that, and then the three next to that and the three next to that.
9.2.431	Erik:	Huh?
9.2.432	Meredith:	I'll show you what I mean. [Meredith places three white rods after each blue rod.
9.2.433	Erik:	How can we make it bigger than him? He did the exact same thing.
9.2.434	Meredith:	There!
9.2.435	Erik:	Ohhhh!
9.2.436	Meredith:	There! Get it?
9.2.437	Erik:	Ohhh! see, there are there to that, three to that, and three to that, so it's like, it's a blue plus one would be an orange, plus another would be a new rod, plus another would be a new rod, and if you have

		another one, it'd, you'd, you're just making new rods. Because if you add one of those to that, it'd be an orange, but then you add another two it'd be bigger than an orange.
9.2.438	Voice:	I got you.
9.2.439	David:	Told you I got it.
9.2.440	Meredith:	Or you could just take the oranges and do that.
9.2.441	Erik:	No, those were uh
9.2.442	David	You could take out the three six nine
9.2.443	Meredith:	You could take out the orange and use two ones.
9.2.444	Erik:	I think the greens would be sixteenths, not
9.2.445	David	You could take out the three six nine and put a blue in there
9.2.446	Meredith:	Orange and six ones. Oh, wait a second! Aren't these nines? Aren't these nines, right?
9.2.447	Erik:	Yeah the blues are nines.
9.2.448	Meredith:	And these are tens, right?
9.2.449	Erik:	Yes, those are tens.