5.0.140	T/R 1:	So you're giving a red the number name one sixth and I understand the young ladies up at the overhead are giving red the number name one third and can red have the number name one third and one sixth at the same time? That's my question.
5.0.141	Brian:	Well, what I mean is-
5.0.142	T/R 1:	I heard what you said Brian, I just wish everyone would listen here because you're going to have to decide and write about this in a few minutes and you're going to have to decide of the arguments which you agree with; Brian's argument or the argument of the other people. And you need to know the arguments of both people so you can write about them and tell me which do you believe and why. And if you don't believe an argument you have to tell why you don't believe it, and if you believe an argument you have to be able to prove it. So we have two different arguments at the table and it's very important that you listen so you understand what the arguments are. [camera pans to Graham who appears to have made the Eiffel Tower with his block, this may be because he is bored or does not understand what is going on]
5.0.143	Jessica:	Kelly and Jackie have something else that like goes with this like—
5.0.144	T/R 1:	Ok we will hear Kelly and Jackie and we will hear Brian's again. Brian said it and I know some of you heard it, I heard it. But I would like you all to listen to these arguments.
5.0.145	Jackie:	Well, we would call this dark green one and the reds one third and the light green one half, and we thought the, we thought one third was bigger by one of these white things. [Her model is using 6 cm as the unit.]
5.0.146	Jessica:	Oh, I think they're making a different size candy bar
5.0.147	T/R 1:	Is that allowed?
5.0.148	Jessica:	Um, no.
5.0.149	T/R 1:	Why not? What's wrong with that? In what way it is not fair?
5.0.150	Jessica:	Because if say you give someone half of this one [12cm?] and then one half of that one [6cm?] and this is bigger than [takes a light green and dark green rod in hand].
5.0.151	T/R 1:	Ok so what do you ladies think? Are you making different size candy bars? What are calling the candy bar when you started the problem? What was one? What did you call one if you're thinking of candy bars when you began the problem?
5.0.152	One of the girls:	The dark green…
5.0.153	T/R 1:	Is that what you built when you went up there, you said the dark green is one? Is that what you said?
5.0.154	One of the girls:	Yeah…[the girls look at each other in agreement]

5.0.155	T/R 1:	Ok then use the—okay if your calling dark green one then I want to hear your argument which is bigger a half or a third and by how much?
5.0.156	Jackie:	Okay, we think that a half is bigger than the third.
5.0.157	T/R 1:	Okay you think a half is bigger than one third and you're calling the dark green one? Did you change your mind?
5.0.158	Jackie:	Yeah, and we think light green is a half [of the 6 cm model].
5.0.159	T/R 1:	Well show me your argument now and tell me which is bigger a half and a third and by how much?
5.0.160	Jackie:	Okay, this is, this is a half [light green] and the red is a third.
5.0.161	T/R 1:	Can you show me why that's a half?
5.0.162	Jackie:	Because if you put these all together they equal up to the one…[Showing that three reds, two light greens both equal the dark green which is one] and we think the light green which is a half is bigger than the red by, by one which is this white one. [Showing the difference between red and LG is a white]
5.0.163	T/R 1:	Ok, I see that you switched what you made, um, your model, uh, but you showed me that one half is still bigger than a third and you still believe that. But what number name did you give to white? You said it was a white rod bigger but I didn't hear what number name you gave to white. I thought I heard you say it's one bigger
5.0.164	Jackie:	Yeah.
5.0.165	T/R 1:	Did you say that?
5.0.166	Jackie:	Yeah, the green, the light green is one bigger than the red. And the red is one bigger, the light green is one bigger
5.0.167	T/R 1:	And what number name are you calling the white?
5.0.168	Jackie:	One
5.0.169	T/R 1:	You all agree with that?
5.0.170	Jackie:	Actually, I used this to um, to tell that the light green is one white bigger.
5.0.171	T/R 1:	Ok, and the number name you are giving to the white you're saying is one,
5.0.172	Jackie:	Yeah.
5.0.173	T/R 1:	you called the green one and your calling the white one?
5.0.174	Jackie:	No. [giggling]
5.0.175	T/R 1:	That's what I thought I heard you say. [asking the class] You hear my question? Is everybody hearing my question. You said you called the light green one, you said you called the red one third, and you said you called the light green one half. Right? And now the white one, right… [puts the white and red together next to the light green] The white one which tells you how much bigger it is, you said

		you're calling it one. So your calling this one and this one [pointing to the white and dark green].
5.0.176	Erik:	[from his seat] I think I know what they mean.
5.0.177	T/R 1:	Erik, what do they mean I'm so confused.
5.0.178	Erik:	[walks to the overhead] I think they mean that they want to call this, the dark green one, one whole, and they want to call this, yeah, like you line all the whites up to it which I think should be six and they want to call it one sixth. I think that's what they're trying to say but they just, they're just not saying it. I think they just, they want to call it one sixth.
5.0.179	T/R 1:	I don't see six of them up there.
5.0.180	Erik:	Well however many are up there that what they are trying to say.
5.0.181	Jessica:	Yeah because I think they meant
5.0.182	Erik:	I think you meant to say not one whole but one sixth.
5.0.183	T/R 1:	Is that what you meant to say?
5.0.184	Girls:	Yeah.
5.0.185	T/R 1:	So you're saying then you all agree, that's what, you all really wanted to call the little white one, one sixth and not one? When you call the light green one? So I'm a little concerned now? Are you agreeing with Brian or disagreeing with Brian that the number name that you would give for how much bigger one half is than one third? Is how much? One half is how much bigger than one third?
5.0.186	Girls:	Um, one, one sixth.
5.0.187	T/R 1:	Is it one or one sixth?
5.0.188	Girls:	One sixth.
5.0.189	T/R 1:	You're sure it's one sixth?
5.0.190	Girls:	Yea.
5.0.191	T/R 1:	Why can't it one?
5.0.192	Girls:	Because that's be um, the dark green.
5.0.193	T/R 1:	The dark green is one? I understand when-
5.0.194	Erik:	But I think you can call it one because you can make the dark green bigger—
5.0.195	T/R 1:	But they didn't, they called the dark green one, Erik —
5.0.196	Erik:	[continuing]:You could call, you can call the dark green one six, the dark green rod six and then you could call the light green rod three—
5.0.197	T/R 1:	But can you do that in the same problem?
5.0.198	Erik:	No [slumps down in his chair]

5.0.199   T/R 1: Yeah you can't change the rules in the problem, now I want to go back— [maybe recognizing Erik]that's very very nice and Erik that was very helpful to me and to the folks up there