

<p>Description: Ariel revisits his solution for the 120 step ladder Parent Tape: Early algebra, investigating linear functions, Series 5 of 7 Date: 2005-12-15 Location: Hubbard School Researcher: Professor Carolyn Maher</p>	<p>Transcriber(s): Baldev, Prashant Verifier(s): DeLeon, Christina Date Transcribed: Spring 2008 Page: 1 of 3</p>
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Speaker Transcription

- R3 Ariel, the rule that you came up with was that you take that number, divide by two, is that right?
- Ariel Yeah.
- R3 So if we divide one hundred and twenty by two, what do you get?
- Ariel Sixty.
- R3 And then you build that ladder with that many steps?
- Ariel Yeah.
- R3 And then you said multiply by two, right?
- Ariel Yeah.
- R3 And then you do what, subtract two. I didn't see you do that. I don't see that sixty there. Where is that sixty?
- Ariel One hundred and ninety-eight.
- R3 [pointing to the papers] Where is that one twenty? I don't see that one twenty that I told you about?
- Ariel Because this is what I did. Twenty is the six, six times ten is sixty. That would be the two hundred.
- R3 Six times what?
- Ariel Six times ten is sixty.
- R3 Hmm, hmm.
- Ariel Two hundred is right here, then I subtracted two and make it one ninety eight and so sixty is one ninety eight
- R3 What do you mean sixty is one ninety-eight? What are you trying to say?
- Ariel Rods.
- R3 You are saying that sixty is one twenty eight.
- Ariel No, one ninety eight.
- R3 And how did you get that one ninety eight for sixty?
- Ariel I did twenty, which would be... six steps is twenty rods. Six times ten is sixty so twenty rods times ten is two hundred and through my rule you subtract it by two to get one ninety eight and then ...
- R3 Wait, wait, wait! Let's focus on this. Up to here, you are getting the number for sixty, right?
- Ariel This is sixty.
- R3 So how did ... Did you use the same rule again? Six is an even number, right?
- Ariel Yeah, yeah, yeah.

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R3 So did you do the same rule of dividing by two?

Ariel Yeah, I divide one twenty by two and got sixty.

R3 No, but how, I am just looking at your rule, you understand what I am saying?
I am looking at your rule here and I am just trying to apply it.

James [picks up Ariel's paper and starts reading]

R3 [to James] OK, you go ahead.

James [reading the paper] You are wrong right there because ...
[There is some talk between Ariel and James about a party and snow and rain.]

R3 So let's do a little bit more, please because... let backtrack a bit, do you mind?
Quickly...OK?

Ariel OK.

R3 [holding the paper]...We'll move on and then I'll ask you a bit more. Is this what you did for one twenty? So I have the rule here, you see what I am saying my point ? I am reading this and I know that one-twenty, so what is the rule? Can we get enough paper? Maybe you can do on this paper separate. So we can look at the rule that you have here, I am really looking for a rule that can help me figure out.

Ariel Should I write this whole thing here?

R3 Yeah.
[S3 writes in his paper:
20
×10
200
-2
198
×2
396
-2
394]

Ariel Done.

R3 Why don't you [inaudible] Let's go here, Ariel. I'm going to put the rule, right? So for every number take half of that number and make a ladder with that many steps [reads the rule from the paper] Right, Ariel?

James [in the background] My rule is right.

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- R3 Then I multiply that... let's see. Is this here consistent with this? Does this go with this? In which way? Can you write one twenty there? So we know for how many rods for the ladder for one twenty eight steps.
- Ariel [writes in his paper]
- Ariel Here we go, half as sixty, yah, yah. Six times ten is sixty, ahh, ahh. For six steps equals too many rods and then six times ten is sixty, so two hundred and
[The video sequence cuts off.]
- R3 Where is the ladder with sixty steps?
- Ariel I didn't do that. It is too much. I shortened it by dividing sixty by ten it gives me six. Since, I had already done six, six times ten is sixty, so I just did the number rods for sixty times ten. So that I didn't have to make a big ol' ladder.
- R3 [pointing to the Ariel's inscriptions] So basically what is this all about? Did you subtract by two?
- Ariel What?
- R3 Did you subtract by two? Here, did you subtract by two?
- Ariel It is right here.
- R3 OK. This is ... One ninety eight is what again?
- Ariel The sixty.
- R3 I see. I see.
- Ariel What's this? Ohh, I put nine! That's two, that's supposed to be a two, my bad.
Two.
- R3 OK, so now I have a question. I see what you are doing.