Description: Comparing strategies for problem 3 when x = 25 Parent Tape: Early algebra: Investigating linear functions, Series 1 of 7: Guess My Rule introduction and Ariel and James with problems 1-3Location: Frank J. Hubbard Middle School – Plainfield, NJ Researcher: Carolyn Maher	Transcriber(s): DeLeon, Christina Verifier(s): Yedman, Madeline Date Transcribed: Spring 2009 Page: 1 of 4

0:00	James	I got to add the odd number. Because you know zero plus one... zero plus one is one. One plus three is...
0:10	Ariel	It's just adding three. You find the answer easily. 1 plus 3 is 4. 4 plus 3 is 7. 7 plus 3 is 10. You just keep on adding three and you get all of your answers. [Ariel extends the table by writing the next pair as 7 and 21.]
0:21	G4	So, Ariel let me ask you, what would you get for twenty-five? Because James got what he got for twenty-five. I want to see if it is the same.
0:30	Ariel	I just got one thing...
0:35	G1	You are trying to find for twenty-five? Ariel? [Ariel keeps writing something in his sheet.]
0:47	Ariel	Seventy six.
0:48	G4	Seventy six?
0:49	Ariel	Yeah.
0:50	James	Seventy-six for what?
0:52	Ariel	For, what's the name, what was the one again?
0:55	G4	Twenty-five
0:55	Ariel	Yeah, twenty-five.
0:56	G1	How you got seventy-six?
0:56	James	It's not no seventy-six, it's eighty!
0:57	Ariel	First, ten times two [writes 10×2, he has extended the table till 10 in the X column and 30 in the Y column] the thing of it is thirty [pointing to 30 in the Y column and changes the 10 in 10×2] so then it would be 30 times 2 is 60 then 5 is 16, plus 16 is 76.
1:17	James	Ten plus five is fifteen.
1:20	Ariel	What happened?
1:21	James	Ten plus five is fifteen!
1:23	Ariel	What happened?
1:24	James	Ten plus five is fifteen!
1:26	Ariel	OK.
1:30	G1	Why did you do times two, can you tell me?
1:33	Ariel	Oh, because she said twenty-five, so the thing for ten is thirty and ten times two is twenty, so thirty times two is sixty, that will be twenty, and then for the five is sixteen.
1:46	James	What? This is what I got. I got eighty.
1:51	James	[pointing to something that he has written] Five times five is twenty-five. Five times eleven is fifty-five. Five times sixteen is eighty because I just found that out. So I got eighty. [The camera focuses on what James has written in his paper: Every number + odd #]

		[Ariel is writing on his paper and mumbling some numbers]
2:08	James	Ten times eight is eighty.
2:10	Ariel	Huh?
		[Ariel is writing in his paper and James is mumbling some numbers.]
2:16	James	… and then thirty times eight is …
2:18	Ariel	Two hundred and forty.

[Ariel is extending the table as follows:

X	Y
0	1
1	4
2	7
3	10
4	13
5	16
6	19
7	21
8	24
9	27
10	30
11	33
12	36
13	39
14	42
15	45
16	48
17	51
18	54
19	57
20	60
21	63
22	66
23	69
24	72
25	75]

2:46	Ariel	Seventy-five. Seventy-five.
2:51	G4	[to Ariel] So Ariel what do we get here?If X equals twenty-five, then what does Y equal?
2:55	Ariel	Huh?
2:56	G4	If X equals twenty-five, so Y equals?
2:59	Ariel	Seventy-five.

3:01	G4	[to James] And James you said when X equals twenty-five, what does Y equal?
3:07	James	Huh?
3:08	G4	[to James] When X equals twenty-five, what is Y equal?
3:11	James	Eighty.
3:12	G4	Eighty, so Ariel got seventy-five and you got eighty [to James]. So what do you guys think?
3:16	Ariel	[looking at his work] Oh, wait a minute. It is seventy-six. If you follow my rule, [pointing to what he has written on paper] twenty-five times … oh, wait a minute [putting his forefingers on his temples] so I must have messed up somewhere because twenty-five times three is seventy-five plus one is seventy-six like I got up here [looks at G4].
3:29	G4	[to James] What do you think James?
3:30	James	[looking at his work in the paper] I got eighty. I don't see how he got it? Well, I'm going to go by my rule. [mumbles something to G4]
3:36	Ariel	Just do the rule on the number. Twenty-five times three plus one … but, wait a minute. Do you even have the same rule as me?
3:43	James	[mumbles and shakes his head]
3:44	Ariel	Exactly! You have a different rule. That's why!
3:49	James	[writing in his paper] But my rule worked. Twenty-five …
3:53	Ariel	[shuffling his papers] Like this one had two different rules. It could have more than one rule. [Ariel makes some funny noises, adjusts his clothing and finally becomes conscious of the camera. James keeps writing in his paper and is mumbling inaudibly as he is writing.]
4:12	James	[to Ariel] Seventy-six.
4:13	Ariel	Seventy-six?Yeahhh!
4:16	G4	But no, see, look, because you have your way [pointing to James] and you have your way [pointing to Ariel] and at first you had different numbers. But then you did your way, [pointing to James] you stuck to your way and then you got to seventy-six. So, I want you to explain to each other what's your rule [pointing to James] and what's your rule [pointing to Ariel].
4:28	Ariel	Mine is times three plus one.
4:30	G4	[to James] And you explain what your rule is?
4:32	James	Mine is every number odd add in order like plus one, plus three, plus five.
4:39	G4	What are you adding that plus one, plus three, plus five to?
4:42	James	To X?
4:42	Ariel	Hmm? [looking closely at James's paper] What do you say?

4:44	James	[pointing to the table in his paper] I start off with one, then add the next number by three, then add the next number by five, then seven, then nine, add odd number in that order.
	Ariel	[looking at James' paper and moving his head vigorously]
4:53	G4	[to Ariel] Does that make sense to you?
4:55	Ariel	Yeah!