

Description: Clip 3 of 6: Trying to explain problem 4 Parent Tape: Early algebra: Investigating linear functions, Series 4 of 7: Guess My Rule problems 4 & 5 Date: 2005-11-03 Location: Frank J. Hubbard Middle School – Plainfield, NJ Researcher: Carolyn Maher	Transcriber(s): DeLeon, Christina Verifier(s): Yedman, Madeline Date Transcribed: Spring 2013 Page: 1 of 5
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Line	Time	Speaker	
1	0:00	R1	So the rule, When I ask you for...
2		Ariel	Oh, $Y+2$, $y +2$ for every number.
3		R1	$Y+2$?
4		Ariel	Yeah,
5		R1	But what is the question that I have? okay
6		Ariel	Y keeps on adding two to itself. Y keeps on adding two to itself. Y started off as negative one but when it added two to itself it became one.
7		R1	When I ask for each on this table do I have to ask for Y value or the x value?
8		Ariel	Y value, Y started out as negative one and negative one plus two is one.
9		R1	So this is the rule (pointing to $Y+2$, on the written work) you have to add two to your y value. Right?
10		Ariel	Um hum, yeah
11		R1	So if y is negative one..
12		Ariel	Plus two is one and that plus two is three and.
13		R1	Negative one plus two is one, so what does negative one get? What corresponds to negative one?
14		Ariel	So negative one to add two to it, first of all you got to bring it to positive zero, plus one is one.
15		R1	According to your table you that's negative one, that's.. what corresponds to negative one?
16		Ariel	Two.
17		R1	Two? According to the table?
18		Ariel	Oh, zero, zero zero.
19		R1	So is your rule correct?
20		Ariel	Yeah wait a minute it's..
21		R1	I have to give you a value correspondence to the y value that I give you right?
22		Ariel	Yeah, like this I got it too.
23		R1	If I say negative one according to your rule what is the x value that corresponds to negative one?

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24		Ariel	Zero.
25		R1	According to your rule?
26		Ariel	No, you have to switch the rule, like here you have to do one minus zero (pointing to paper) equals one. Three minus one equals two. Five minus two equals three. Seven minus three equals four. Nine minus four equals five. Eleven minus five equals six. Thirteen minus six equals seven. Fifteen minus seven equals eight. And that's another way to prove my rule.
27		R1	So that would be another rule?
28	02:20	Ariel	Yeah, that would be another rule if it were to be y first and then x second. For subtracting one.
29		R1	So there are like two kind of rules?
30		Ariel	Yeah.
31		R1	Two different rules?
32		Ariel	Yeah, like if this switching and (inaudible)
33		R1	Ok, so for..
34		Ariel	Like this is adding and y x would be subtracting.
35		R1	This is adding?
36		Ariel	Yeah.
37		R1	Adding two when I give you the value of y.
38		Ariel	Y it would be subtracting two.
39		R1	Okay so.
40		Ariel	This is, if you were to put y first it would be minus two like the number would go in (inaudible).
41		R1	Ok so what is (points to paper) this useful for? What is it used for (pointing to rule on student work).
42		Ariel	Cuz y, it started out as negative one and if you add two to that it's one and if you add two to one that it's three then you add two to three that its five.
43		R1	So y is negative one so you okay so the value of the value that corresponds to negative one is one?
44		Ariel	Wait what?
45		R1	According to this rule.
46		Ariel	According to this rule zero, zero came out negative one. It's subtracting one.

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47		R1	Okay let me see
48		Ariel	It's two it's like this because for this the rule does.
49		R1	Okay for this when I say y is negative one do I get this number or this number.
50		Ariel	Y is negative one plus this rule yeah this number, yeah yeah exactly.
51		R1	So I get this number. When y is this I get this number (going down the y column) when I say y is three I get this number. And what are these numbers for (pointing to x column)?
52		Ariel	These are the numbers that x come out as.
53		R1	So is there another rule for these?
54		Ariel	Well if you reverse it, negative one..actually yeah yeah yeah, negative one, but the funny thing is to get to negative one to one don't you have to subtract from zero? If you subtract from zero it would be zero minus one. But to get to this you have to add one, add two but this is subtracting if you switch it over. To get this you have to subtract but for these you have to add.
55		R1	Oh so how can I deal with a rule like that? When will I know I have to subtract.
56	05:23	Ariel	Oh I got it zero equals subtraction and any number above zero equals adding.
57		Ariel	Cuz dealing with zero will be subtracting and a number higher than zero you are adding.
58		R1	Okay so you're getting a rule to write to write the numbers on this column right. In this case we're working with the y. Is there any way that I can predict where is the entry that corresponds with four?
59		Ariel	If you know all of these up here yes.
60		R1	Do I have to know all of them?
61		Ariel	No not all of them.
62		R1	If I say one thousand five, if x is one thousand five what is the next number?
63		Ariel	The next number?
64		R1	What is the number that corresponds to one thousand and five?
65		Ariel	Inaudible
66		R1	So you see that I'm asking you, to get the number the x number, (inaudible).
67		R1	This is a very interesting
68		R1	You think you already have a rule?
69		R1	If this is your rule y plus two.

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70		Ariel	No my rule is if you're dealing with zero you're subtracting higher than one you're adding
71		R1	So if your dealing with zero you're subtracting
72		Ariel	If your dealing with zero you're subtracting one, but if you're dealing with one and up you're adding two.
73		R1	So if I'm dealing with zero I have to subtract one..
74		Ariel	One. If you're dealing with a number higher than zero you have to add two.
75		Ariel	You have to add two to this column (pointing to x column), you have to add two to this column.
76		R1	What value will correspond to negative one?
77		Ariel	Negative one? One?
78		R1	According to your rule
79		R1	What x would be to y? To negative one? I'm giving a value for x, I'm saying x is negative one. According to your rule what will be y?
80		Ariel	Zero.
81		R1	Why?
82		Ariel	No wait a minute, negative two.
83		R1	Negative two? Do you see any pattern here? Negative one, one, three, five, seven
84		Ariel	You're adding two.
85		R1	If I have negative one here? You have what? Negative two. Do you still have the same pattern.
86		Ariel	If you have negative one then you'll have to go to zero, you're going to be subtracting, making it negative two.
87		R1	(inaudible) So what happens to your pattern in the table?
88		Ariel	It starts going up, by one.
89		R1	You mean increasing or decreasing.
90		Ariel	Increasing, as it goes down it is increasing.
91		R1	By how much is it increasing.
92		Ariel	By two,
93		R1	But before according to your rule negative one would be negative two. Is it still increasing by two.

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94	Ariel	No you're increasing by one it would go negative two, negative one..
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