
Session Six

Conceptualizing and Representing Linear Relationships

Transcript: Logos Lesson Class 2

How Did You Get Your Equation?

[4½ minutes]

- 39:27 Gisele:** How did we get those equations?
- 39:30 Acotirene:** Somebody want to explain how you got the equation? Kiril.
- 39:33 Kiril:** I got a closed form equation by just three x plus two, because three is the slope and two is the y -intercept.
- 39:42 Kiril:** And to make the recursive out of the closed form . . .
- 39:44 Gisele:** How did you know that three was the slope?
- 39:46 Kiril:** Oh, because if you look at the table . . .
- 39:49 Acotirene:** Want me to make the table?
- 39:51 Kiril:** All right. Zero, one, two, and three. And for zero it's two . . .
- 40:14 Kiril:** For zero it's two, for one it's five, for two it's eight, and for three it's eleven.
- 40:08 Kiril:** So between all those y , y variables, there's a difference of three.
- 40:18 Kiril:** So that means it's a linear equation.
- 40:21 Acotirene:** OK.
- 40:23 Kiril:** And I found out it's a linear equation.
- 40:25 Kiril:** So if there's a difference between, if there's a difference of three, it means that's the slope.

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- 40:31 Kiril: And when you look at zero, when it's zero that needs to be one.
- 40:31 Acotirene: OK.
- 40:51 Gisele: OK. Did anybody get the equation a different way?
- 40:55 Gisele: Reymond?
- 40:56 Reymond: I got y equals x plus, parentheses, x plus one times two.
- 41:01 Gisele: Whoa. Say it again?
- 41:04 Reymond: Y equals x plus parentheses x plus one close parentheses times two.
- 41:12 Acotirene: How did you get that?
- 41:13 Reymond: It's not like that.
- 41:18 Schemel: Plus two?
- 41:19 Reymond: Times two, just put a two.
- 41:22 Reymond: I got that because I looked at the center part of these . . .
- 41:26 Reymond: And I saw on the first one was one and the second one was two, and the third one, it was three.
- 41:31 Reymond: And I saw the relationship between the x value and that value, one and one, two and two, and three and three.
- 41:37 Reymond: And I figured that was x , so that's why I have the plus x , and to get the, uh . . .
- 41:42 Acotirene: Did it look like this?
- 41:44 Reymond: Exactly. To get the top and bottom parts, the top part is two and the bottom part is two . . .
- 41:49 Reymond: So I saw the relationship to get from one to two, and two to three, and three to four.
- 41:54 Reymond: So I know you just add one, so that's x plus one, and since there are two of those, multiply that by two.
- 42:20 Reymond: Then you just add the x and the total area.

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- 42:06 **Acotirene:** Does everybody understand what he just said?
- 42:08 **Students:** Yeah.
- 42:10 **Acotirene:** Everybody understands it?
- 42:13 **Acotirene:** Alexis, do you understand what he said?
- 42:14 **Alexis:** Yes. X , um, y equals three x plus two just like the simplified version, because if you did the distributive property, it would be y equals two x plus two . . .
- 42:24 **Alexis:** And then you would add the x and it becomes three x plus two. So it's just a simply, well a longer version.
- 42:35 **Gisele:** I don't understand what you did, Reymond.
- 42:37 **Acotirene:** OK, well since nobody had a question on it, Kevin, why don't you explain it?
- 42:43 **Gisele:** What was Reymond trying, what did Reymond do?
- 42:47 **Gisele:** Jordon?
- 42:50 **Jordon:** He took the equation $y = 3x + 2$ and he put it in . . .
- 42:59 **Jordon:** He simplified it by, um, in order to make it smaller, so three x is actually x times x times x plus two.
- 43:11 **Gisele:** Wait! Three x is x times x times x ?
- 43:14 **Jordon:** Times. Uh, no, it's three times x .
- 43:18 **Gisele:** Uh-hm.
- 43:18 **Jordon:** Plus 2. So if he wants to do it that way, he just wrote out so that when he simplified it . . .
- 43:27 **Jordon:** It is equal to $3x + 2$ in which x times x , is equal to uh, no, x plus two is equal to two x .
- 43:37 **Jordon:** And in Reymond's equation, so x times x is equal to two x and x plus one is equal to, I think it's one x .
- 43:49 **Jordon:** So when you add it all together, it comes three x times two, isn't it?