MIA BULJAN: When I'm doing the dots I'm just hoping anyone, um, can understand so they have to explain themselves.

MIA BULJAN: What did you get? Mm-hm?

STUDENT: Seven.

MIA BULJAN: Anybody else get seven? Lots of sevens. Anybody get a different answer? Well, if we were voting for the most popular answer it would definitely be seven, but in math it's the answer that we can prove is right. So what I want to ask you is, how do we know? So what are the pieces that we saw? How did you know what to build? What parts did you see? Mark, Philip, you understand the question?

STUDENTS: Yeah.

MIA BULJAN: When you went to build on your mat what I had, can you remember the first thing that you built? How many it was?

STUDENT: Seven.

MIA BULJAN: How did you know how to build it?

STUDENT: Because...

MIA BULJAN: What pieces...what parts did you see?

STUDENT: So when I saw it I counted it before I got my dots out really fast, so.

MIA BULJAN: So tell us what that looked like. How did you count it?

STUDENT: I was like...

MIA BULJAN: Can you hear her idea, Philip? Because since you're facing the wrong way, what it looks like when we listen to our friends and our classmates when we hear their ideas is we're looking right at them. Come on up. You want to show us, Leilani?

STUDENT: Yeah.

MIA BULJAN: RJ, Afola, turn. Show us what you did. Show us how you counted.

STUDENT: I was like, 1, 2, 3, 4, 5, 6...wait. Wait, I knew it was seven. 4, 5, 6, 7. Right here.

MIA BULJAN: Okay. So show us up here.

STUDENT: 5, 6, 7.

MIA BULJAN: Everybody see how she counted? She went like this. Go ahead and have a seat. She went 1 and then what was next? 2, 3, 4, 5, 6, 7. Um, who said you skipped the middle one? John Carlo was looking at her, and watching her, and listening to her idea so closely that when she made a mistake with her counting, he could see how to fix it. Watch what happened. Turn around, Daniel and watch. See if you can listen this closely like he did -- so closely that you can tell when it doesn't make sense. Here's what she did: 1, 2, 3, 4, 5, 6. Do you see what John Carlo saw? What did he see? I'm going to count it again. 1, 2, 3, 4, 5, 6. What do you notice? I'm going to count it one more time. Watch, Philip. Watch how I count it. 1, 2, 3, 4, 5, 6. What did John Carlo see? Silas, what did he see?

STUDENT: That Leilani didn't count the middle one but only all the other ones, but not the middle one.

MIA BULJAN: And he was watching and listening so closely that he saw that she skipped the middle one.

MIA BULJAN: Listening is a muscle and is a skill that needs to be developed, and so if they can give me two... When I'm doing the dots I'm just hoping anyone, um, can understand so they have to explain themselves.

MIA BULJAN: Friends, that's how we listen in math. So closely that we know if it's right or wrong. Let's listen to one more and see if we can listen that closely. Who has a different idea? So we just counted -- 1, 2, 3, 4, 5, 6, 7. How did you know where to put the dots? What pieces did you see? Who has a different idea? Using this one down here? Okay. What's the first thing you counted?

STUDENT: One.

MIA BULJAN: And where was that?

STUDENT: At the top.

MIA BULJAN: And when you counted, did you count straight down or did you count around?

STUDENT: Around.

MIA BULJAN: So let's count. 1 and then where did you go? Here? 2, 3, 4. Does everybody see this?

STUDENT: Yeah.

MIA BULJAN: How many are inside there?

STUDENTS: Four.

MIA BULJAN: Four. And were you done counting? No? And what else did you count?

STUDENT: I count the ones at the bottom.

MIA BULJAN: Let's count the ones at the bottom, everybody. 1, 2, 3. So now they have four on the top and three on the bottom. Is that still seven?

STUDENTS: Yeah.

MIA BULJAN: What do you think?

STUDENT: Oh yeah, it does make seven.

MIA BULJAN: You sure?

STUDENTS: Yeah.

STUDENT: No.

STUDENT: Yeah, it does.

STUDENT: I'm not sure.

MIA BULJAN: How could you be sure?

STUDENT: Yes, it does.

MIA BULJAN: Well, John Carlo, saying it louder doesn't make it true. You have to think about how you would explain it to her. How do you know that it's seven?

STUDENT: Because I did this before.

STUDENT: 4, 5, 6, 7, 8.

MIA BULJAN: Well, hold on, Silas. So watch her idea. Lisette, show us how you counted.

STUDENT: 4, 5, 6, 7, 8.

MIA BULJAN: So you started with 4. Where's the 4 up here? Come show me in the picture. Where do you see 4? Because you went like this -- you went 4. Where's that 4 up there? Come on. Silas, you can't just tell her no, you have to listen to what she's saying. Okay? Watch her. So Silas, see if you agree with this part. She counted like this -- four. And show it to us.

STUDENT: 4, 5, 6, 7, 8.

MIA BULJAN: So what's she doing? Everybody count just like her. 4, 5, 6, 7, 8. What's she doing? Can you describe what she's doing?

STUDENT: No.

MIA BULJAN: Lisette, this is her idea. Count 4 and then count how many more?

STUDENT: 4, 5, 6, 7...oh!

MIA BULJAN: What's her idea? She's counting what? She has a 4 part and what's the other part?

STUDENT: 3.

MIA BULJAN: Can you match that up here? Can you find the 4 and the 3 up here? Turn around. Is there a 4 and a 3 that you see? Okay, here's the 4 and then where's the 3? All the way around like that? This is Lisette's way. Lisette and Ashley put this together. Did everybody see what Ashley did...I mean what Lisette did? Ashley, show us on your finger. She went like this...everybody, eyes up here. She went 4 and then she counted 5, 6, 7. So do you see her 4 part?

STUDENTS: Yes.

MIA BULJAN: And do you see her 3 part?

STUDENTS: Yes.

MIA BULJAN: Dallon, do you see her 4 part and do you see her 3 part?

STUDENT: Yes.

MIA BULJAN: And do you know what Lisette did? She found a 4 part in the picture and then she found a 3 part in the picture. So she matched her fingers to the 4 part and the 3 part. Lisette, what do you think the answer is, 7 or 8? So let's count it again. Show me how you count. Everybody, let's watch her count. Does everybody have their eyes on Lisette so we can see her part? She's going to show us one more time. Show us the two parts that you counted.

STUDENT: 1, 2, 3, 4, 5, 6, 7.

MIA BULJAN: What do you think of that, John Carlo? Did that make more sense to you? Did you see a 4 part and a 3 part? Here's where Lisette saw it. She saw 4 and she saw 3. And this is Sayana's. She also saw 4 and 3. What do you see? Anybody see anything different? Josie, did you think of your idea? What did you find?

MIA BULJAN: You know, they did 1+1=2 and then they were just kind of quiet, so Rahahn offered this idea so we got to test it. And then a lot of what happened was like, you know, he's doing the right thing, he's thinking, and all we can do is have ideas, and then we just test our ideas. And some of our ideas work and some of them don't, and that's what ideas are. And then even just that little bit of conversation all of a sudden all of the hands were up. So a lot of it is just like that little piece of, like, convincing them it's okay to talk.

MIA BULJAN: Right now you are doing exactly what mathematicians do -- you think of an idea and you test it. That's it. So Sayana had this idea and Leilani had this idea that we can count these and she counted them just like this. Watch how she counted. 1, 2, 3, 4, 5, 6, 7. And John Carlo, the mathematician, he was listening so closely that he even noticed when she made a mistake, and he could tell her which one she forgot to count. You will stop, Daniel. And that's what mathematicians do, we listen. And then we have this other idea that we could see it in parts. So Sayana saw this 4 part and she saw a 3 part. And Lisette, when she was trying to count it she had to make sense of it for herself. She's found a different 4 -- Cial -- and a different 3.