

ERIKA ISOMURA: That afternoon was our first formal naming the place value or places of decimals.

MIA BULJAN: Oh my gosh. All this, on the 26th, so fifteen days in.

ERIKA ISOMURA: Mm-hmm. [affirmative]

MIA BULJAN: Not fifteen work days, but let's say, two weeks for them to noodle on it and think about these patterns. Then, you finally do, what looks to me like, a very traditional textbook kind of lesson around -- this is where they would really start ...

ERIKA ISOMURA: Mm-hmm. [affirmative]

MIA BULJAN: ... in some ways, right? So tell us a little bit about that.

ERIKA ISOMURA: We talked about -- so my question, overall question, was decimals has that root, that means 10, so how are tens important in the way we build numbers? So everything we talked about was in relation to that question. So we talked about -- so when we write numbers, we started with the ones place. And then, what comes next? The tens. And I know it's backwards here, which confuses me, but they were fine with it. Tens place, hundreds place, thousands place. And so we talked about, so ...

MIA BULJAN: They're more flexible.

ERIKA ISOMURA: Yeah, they are. They're willing to be okay with that. How do we think about the ones place, and how's it different from the tens place, the hundreds, and so on. And they talked about each time you move over, it's like 10 times bigger, and so on. And then we talked about, "Okay, so here's this decimal. What's this place called?" They were able to tell me, because we've played with it. They named it as the tenths and the hundredths. Then, I asked what would be next? Thousandths. They were able to name it, and they wanted to keep going.

MIA BULJAN: Of course.

ERIKA ISOMURA: And, you know, lots of spitting. That's what happens when you say those words. So then we wrote it out. One -- and we're more familiar still with the fraction notation, so we went with that.

MIA BULJAN: Okay.

ERIKA ISOMURA: The 10th, the 100th, and how do we go this direction? They said, "Well you're dividing by 10 each time you go. You're going 10 parts smaller, and so on."

MIA BULJAN: Nailed it.

ERIKA ISOMURA: Yeah. It was great. Then, because just I wanted to know what would happen, I asked them a question that I always wondered when I was a kid. So, you know, these are your wholes, these are your parts. You've got tenths in the wholes -- tens in the wholes, tenths in the parts. Hundred, hundredths. Why is there no parts for the ones?

MIA BULJAN: Where's the oneth?

ERIKA ISOMURA: Yeah. I sent them off to go talk to their partners. And I was really impressed because quite a few of them said, "Well if you think about the denominator, the tenths have a 10 and so on. If the ones -- the oneths had a denominator of one, it would just be that number, which is a whole. Therefore, it would never be on the parts side." I thought, cool. I think they've got some pretty good understanding about some fractions and place values.

MIA BULJAN: So Erika, let me ask you this. You had that question as a kid.

ERIKA ISOMURA: Mm-hmm. [affirmative]

MIA BULJAN: Did you ever resolve it for yourself?

ERIKA ISOMURA: Not until I was an adult.

MIA BULJAN: Oh. That was just resolved for me with their explanation.

ERIKA ISOMURA: Yeah.

MIA BULJAN: That's not a mystery I ever thought to unravel, and now I'm super comfortable with it. That's a really good explanation.

ERIKA ISOMURA: Yeah. I was super impressed, because I didn't have a clue when I was a 10-year-old.

MIA BULJAN: Nice, okay.