STUDENT: That one is zero point zero two because, um, like, if you...if you do... Sometimes the zeroes can be helpful because zero point zero two...so you could take off these two zeroes and then put these two back on, but with the decimal.

STUDENT: Because look...oh yeah!

STUDENT: Yeah because then that will make it easier...easier for your brain to do it.

STUDENT: Okay, so let's keep on checking. I got ninety. Oh yeah, so it's [inaudible]. I only got one wrong.

STUDENT: So what do you think, uh... Okay, how did you feel about, like, um, seven thousand divided by ten?

STUDENT: That was easy because I just put...I knew I just, um, I knew it was seven hundred automatically because I only thought about the zeroes. Like, uh, I knew I had to find...uh, seven thousand...I knew I had to find, uh, number that's exactly like seven thousand but has one less zero. Like...it's hard to explain. It's hard to explain. But I do this all the time. So. Okay, I knew automatically seven hundred...wait. Yeah, I knew automatically seven hundred would get the answer because, uh, in my head I knew ten would go into seven thousand seven hundred times, because I did seven hundred times ten [inaudible].

STUDENT: Is a fraction the same as a decimal?

STUDENT: Oh yeah because...

STUDENT: Four-tenths equals zero point four.

STUDENT: We have different answers because you got...

STUDENT: I got them in fractions, you got them in decimals. All right.

STUDENT: So what did you write for that part?

STUDENT: What did you do to help yourself solve these problems mentally?

STUDENT: I talked and discussed all of the problems with my partner.

STUDENT: I tried to discuss them and I...but I figured out that [inaudible]. I kind of switched it and I put the decimal behind some numbers, but not for every problem. That's what I think.

STUDENT: But you have to write it down.

STUDENT: I know.

ERIKA ISOMURA: Okay, but we don't know if that answer is correct or not so we have to check. We think it's going to be a fractional piece. Is there anything else that might turn up as a fraction when you actually double check?

STUDENT: Maybe this one.

ERIKA ISOMURA: Okay, why?

STUDENT: Because, um, in zero point eight divided by ten, these are more, like, different and that one starts with a decimal instead of an actual whole.

ERIKA ISOMURA: Oh, so you already have a decimal instead of a whole, and you're still passing it out all these pieces. Okay. What do you think? Do you think that will end up being a fraction?

STUDENT: Yeah because zero point eight is smaller than ten because...

ERIKA ISOMURA: Oh, it's smaller...so your dividend is smaller than your divisor. Is that...hm. So that's smaller than that and you think it'll be a fraction. That's smaller than that and you think it'll be a fraction. Interesting.

STUDENT: Yeah because you don't have enough pieces, like...like, you don't have enough pieces to make a whole.

ERIKA ISOMURA: Okay. Here I noticed this first number is smaller than that second number, and you said you think that'll end up being a fraction.

STUDENT: Yeah.

ERIKA ISOMURA: I'm noticing, in fact, that all of your stars have what you said, that the first number, your dividend is smaller than your divisor. Could that be something that might be useful in the future?

STUDENT: Yeah.

ERIKA ISOMURA: Could that be a pattern that might help you in the future?

STUDENT: Yeah.

ERIKA ISOMURA: Look at the question at the bottom of your page.

STUDENT: Oh!

ERIKA ISOMURA: Oh, that could be helpful, huh, because you guys found something. Nice!

ERIKA ISOMURA: So Ms. B was telling me that you guys were also talking about some of the patterns on the poster were helping you think here.

STUDENT: Yeah.

ERIKA ISOMURA: So just now you were talking about how this first number being smaller and the second number being bigger was a hint that you're going to end up with a fraction.

STUDENT: Yeah.

ERIKA ISOMURA: Is it true on the poster also?

STUDENT: Yeah because, like, in eight divided by ten it's also a fraction.

ERIKA ISOMURA: Okay. Do we have anything smaller? Is it only eight divided by ten that has that relationship of small divided by larger?

STUDENT: Um...

ERIKA ISOMURA: Rosa Linda, do you see anything else where it's smaller divided by larger?

STUDENT: Oh yeah.

STUDENT: Maybe it's, um, eight, like...

ERIKA ISOMURA: So Federico's thought was you know that you're going to get a fraction if you have a small number divided by something bigger, like eight divided by ten on the poster. Is there anything else on the poster that has something small divided by something bigger?

STUDENT: Eight divided by a hundred.

ERIKA ISOMURA: The eight divided by a hundred. Did we get a fraction as an answer?

STUDENT: Yeah.

ERIKA ISOMURA: Huh! Were there any others?

STUDENT: Yeah, eight divided by a thousand and eight divided by ten thousand.

ERIKA ISOMURA: Okay, so that seems to give a lot of credence to your belief that one good clue is when we have a small number divided by a larger number, we're probably going to end up with a fraction or a decimal as an answer. Nice! That was awesome! Good job. You guys have noticed a really important pattern.

STUDENT: I also think, like, the one...eight-tenths divided by ten, like, we just got eight-tenths.

ERIKA ISOMURA: Oh! What about that? What about eight-tenths? Is eight-tenths smaller than the ten wholes?

STUDENT: Yeah.

ERIKA ISOMURA: Hm. That's true. So we see them as whole numbers, the eight wholes divided by one hundred wholes, and also the fraction in the dividend place divided by a whole number. Very good! That's really cool. Nice job of putting together a lot of patterns and seeing something that we haven't talked about yet. Okay, so that means on the next number talk you two are going to be in charge of pointing that out to the class. Right? Okay.

STUDENT: I get two times one so then that's two, and then I add the four zeroes with the dot.

ERIKA ISOMURA: Interesting. So can you show me in your answer where those four zeroes are and the dot?

STUDENT: One and then the dot, two, three, four.

ERIKA ISOMURA: Do you think that'll work every time?

STUDENT: Yeah. It worked with this one and...yeah, these two because it's dividing by, um...what are they called?

ERIKA ISOMURA: Dividing by...

STUDENT: A decimal. Because they're dividing by a decimal.

ERIKA ISOMURA: Oh, a decimal divided by a whole number?

STUDENT: Yeah, instead of a whole divided by a decimal.

ERIKA ISOMURA: Huh! Hold that thought. I'm going to ask you a little more.

ERIKA ISOMURA: Primarily with the twenty and twenty-fives...

MIA BULJAN: Yeah.

ERIKA ISOMURA: All of the issues coming up because we've only used the counting numbers.

MIA BULJAN: Did you hear what she just said?

STUDENT: Yeah.

MIA BULJAN: She said that's supposed to make you go, "Huh?" And it did, didn't it?

STUDENT: Yeah.

ERIKA ISOMURA: So that might be a place for a heart where you're not...you want to discuss it because there's something there that's a little bit on the weird side, and we need to have a discussion. And what makes these numbers, twenty and twenty-five, different from all of the talks we've done so far?

STUDENT: Because they're two digits.

ERIKA ISOMURA: Yeah.

STUDENT: Yeah, two digits and it's kind of hard because it's division with the decimals.

ERIKA ISOMURA: Exactly!

STUDENT: And these are three digits.

ERIKA ISOMURA: Yeah, that's exactly right! So if you notice on the first side, these are all the kinds of numbers we've been doing. So even though this is a four-digit number, there's really...it's a seven thousand. So it's still just a seven even though it's seven thousand.

STUDENT: But I noticed something. Some of the problems are [inaudible] on the back, I think.

ERIKA ISOMURA: No. Actually they're not but there're some similarities. And on the back I started you with ones that I knew you guys could do that are pretty, you know, comfortable, and then we start getting into these kinds of problems that we haven't really talked about.

So, remember whenever I do work with you, some of it's going to be to check in and see are you getting what we're doing, and some of it is to check in and see are there things that you're getting that we haven't really officially studied yet, or are there things that maybe we'll go, "Oh, this cool! Let's go here because this is a great place for the kids to go because I think they're ready, and I think they have some interesting things to share."

Okay? So give it a try. Don't worry if it's not correct. Don't worry if it's correct. Either way we're going to learn something and we'll be able to discuss it in more depth. Okay? Okay.