

MICHELLE MAKINSON: You're absolutely right but it's a new fraction, okay? So you're going to make a number line. Right? So you're going to need to make a number line and figure out all those different pieces that belong there. And here's the fraction you need to do it for. Oh! Let's say this fraction together. Everybody.

STUDENTS: One whole, one fifth.

MICHELLE MAKINSON: One and one fifth and I like what Mariana said. There's one whole and a fraction. When those two pieces are together, does anybody know what kind of number that is?

STUDENTS: Um...

MICHELLE MAKINSON: We haven't talked about it yet. Mixed number because it's a mixed of a whole and fractional parts?

STUDENTS: Yes.

MICHELLE MAKINSON: So you have to decide where your number line starts, where it ends, and all those individual things. Work on that now. When you're done, turn it over and just relax. We're going to do individual work and then we're going to learn from each other. So do your best work on your own and turn it over and wait. We're all going to do it at the same time. So you know this is bigger than what?

STUDENT: A whole.

MICHELLE MAKINSON: Yeah. So what are you going to put here? What...(inaudible) you're going to start with? What number goes there? As you move this way, what happens to the numbers? They get... Bigger or smaller?

STUDENT: Bigger.

MICHELLE MAKINSON: Bigger. So if you're doing this number, what would be a good whole number there? They're getting bigger so would there be a place for that if you put two here? You've got to make some decisions and it's okay because we're going to do way more number lines. So just do the best you can so we can share. Okay? So is two bigger or smaller than that number?

STUDENT: Bigger.

MICHELLE MAKINSON: Bigger. So do you want to start with two? What's the next whole number down? What whole number is less than two?

STUDENT: One.

MICHELLE MAKINSON: One. So should you start there? Is one smaller than this number? One and one fifth?

STUDENT: Yes.

MICHELLE MAKINSON: Okay, so that's one. What number do you want to be here? So you're... Okay, well, that would be a whole number. What's the next whole number after one? Let's write that clearly. What's the next whole number after one? The next one would be?

STUDENT: Two.

MICHELLE MAKINSON: Two. So does this number fit between these?

STUDENT: Yes.

MICHELLE MAKINSON: Okay. So try to decide where that would be.

MICHELLE MAKINSON: ...in a number line of some sort. So I want you to share your number line with your partner. Lily, get back to your seat, please.

STUDENT: Right now?

MICHELLE MAKINSON: Right now. Take turns, explain why you put what you did on the number line, and justify it.

STUDENT: I did this because the one represents half way or one whole, and then the x is where it is. So it is one whole and then one fifth.

STUDENT: I did the number line and then I did it from the half, and then right after it, but then I put one fifth to mark where it was.

STUDENT: Eleven dots, uh, eleven dots and I put mine almost in the middle because one fifth, and it's in the middle.

MICHELLE MAKINSON: We're trying to learn from other people when we talk to them, so you need to understand their work, you need to be able to explain your work. And we're going to seek out other partners to get clarity of what we're doing.

STUDENT: And here is the number line. There are ten pieces to get one whole and then another ten pieces to get two whole. And two tenths are equivalent to one fifth, since if you double the one, it's two and if you double the five, it's ten, so two tenths.

STUDENT: Um, I did the five because that's one fifth so that would be five, unless you do the equivalent fraction. So then this is a whole, and then it is one fifth on this side because it's one out of the five.

MICHELLE MAKINSON: And now for this fifth fraction, this fifth representation of a fraction, I'm going to let you choose the representation that works the best for you. Whichever one you want to do. So you could do an area or a set model, you could do a verbal description, you could do a word problem, you could do a number line. Okay? Are you ready?

STUDENT: Yup.

MICHELLE MAKINSON: Okay. So you choose. And the fraction — let's say the fraction together.

STUDENTS: Twenty-four tenths.

MICHELLE MAKINSON: Twenty-four tenths. So you make a representation that represents that fraction, please. And then leave it visible.

STUDENT: How to get this?

MICHELLE MAKINSON: Do the best you can. Make sense of twenty-four tenths. Think about what that means. How many tenths do you need to make a whole? How many tenths do you have?

STUDENT: Okay, so right here I have a symbolization of a picture of twenty-four tenths. So twenty-four...so twenty is two times as much as ten, and a whole is ten. So these two right now...right here symbolize twenty and this one represents four, because the only thing left of twenty-four if we subtract twenty is four. So I just...we just...I just had to fill out four here instead of all the ten. And then if I had to fill out every single bit then that'll be thirty tenths, which would be exactly three. So in total this is two and four tenths, which is equivalent to two and...two and two fifths. That's right!

STUDENT: Sure. Uh, I did, uh, I made three whole groups because when you need twenty-four tenths you times the ten and...the denominator by how many you need. In this case, with twenty-four, you need three. So then I shade two...whole two and two wholes, and then four of the final whole.

STUDENT: I did, I did three groups of ten balls and, uh, there are ten in each one, so that's twenty, and then that's four, so that's twenty-four. So the rest of them are shaded. So twenty-four tenths are not shaded.

STUDENT: So here we have the people, right? Because it's twenty-four tenths. So here we have ten because that makes one whole. Here we have another ten and I have an "R" in front of it as a remainder. And over here I have four tenths, which is also a remainder which I'm still drawing another four square headed [inaudible]. I've even named them. Okay, Steves, Freds, Bobs.

STUDENT: Okay, so here we did a model of twenty-four squares, so we usually...so usually ten of them are shaded and the rest are not. So it's also like, it's the same and the same as that. So two and four tenths, and uh, I also did twenty-four tenths.

STUDENT: Noelle, so if it's past, like, one whole and it's over here, and it's twenty-fourths...twenty-four tenths, where is it?

STUDENT: Uh, so...

STUDENT: If this is half...

STUDENT: Does it come before or after?

STUDENT: Before.

STUDENT: Okay, so it's somewhere right here.

STUDENT: Just imagine these as groups of ten and this is thirty.

STUDENT: So wouldn't it be, like, right here?

STUDENT: Yes. Look. It's not thirty and it's past twenty, and it's not twenty-five. It's below that.

STUDENT: Oh, so it's this marker here? Oh, okay!

STUDENT: You get it now? Good! I thought you were going to say no.