MALLORY WILLIAMSON: All right. So, can you come on to the carpet, please? Okay. The last part I'm going to go through, 'cause we're wrapping this up, but I want you to turn to someone who's not in your group. Make sure you're working with someone not in your group. Make eye contact with them, and share what was the total that you discovered for all of the plots for number three.

STUDENT: And then I made it into a [inaudible] and then I got sixty-fourths, and then I added that to the one I got up here because this is just half of the number line. I added this part of the number line, and then I took sixteen and a half and I made one-half of it four-eighths, so I subtracted fifteen and seven-eighths from sixteen and one-fourth and I got five-eighths.

STUDENT: I agree.

MALLORY WILLIAMSON: For the sake of time, 'cause once again I want to focus on the modeling part, the total for all of the data is fifteen and seven-eighths. Okay. One important thing to know is that when we subtracted from sixteen and a half, or sixteen and four-eighths, there's something that should stand out to you right away. So, Christopher, what do you recognize before we even subtract?

STUDENT: Um, that you've got to be—You'll have to regroup.

MALLORY WILLIAMSON: Why do we have to borrow and regroup or rename our fractions in order to subtract?

STUDENT: Because if we subtract four-eighths minus seven-eighths, that would be negative-three-eighths.

MALLORY WILLIAMSON: So, right now, this would be a negative-three-eighths, and we're not in middle school yet. We're not dealing with negative integers, so we want to stay with a positive number. So we're going to borrow and regroup. Now, some of you decided to rename as improper fraction, or fractions greater than one, and that's okay too. So, if you were able to do that, that would simply be multiplying sixteen by eight and adding the four to that. Angel, did you do that? Did you rename to improper fractions? Or you just borrowed and regrouped? I think you just borrowed and regrouped. Okay. All right, so, this is where we get the sixteen and twelve-eighths minus fifteen and seven-eighths. Okay. Now, the extra fraction that we end up is five-eighths and I'm going to show something real quick. When we're dealing with the sixteen and a half with models, you can do this two ways. You can actually start on a number line. Now, I know that you guys have been taught this since kindergarten, but you do not have to start a number line with zero. I was talking to group five and the phrase that came out that I really liked what they said was, we can start with the least number. So, the least number that was being used when we were subtracting was the fifteen and seven-eighths. So, from here, we can create a number line and have it start at the fifteen and seven-eighths, and what do we need to go up to?

STUDENTS [collectively]: Sixteen and—

MALLORY WILLIAMSON: Sixteen and a half. So, when we mark where our sixteen and a half is, or sixteen and four-eighths, we need to know all of the space in between. So, how can we figure that out? Roberto?

STUDENT: You can add?

MALLORY WILLIAMSON: Hm?

STUDENT: That you can add?

MALLORY WILLIAMSON: Add. So, I'm going to take your advice and I'm going to add certain fractional amounts to make it easier for me to figure out, so fifteen and seven-eighths, what comes next?

STUDENT: Fifteen and—Sixteen.

MALLORY WILLIAMSON: Fifteen and eight-eighths, which is equal to sixteen. Okay. What comes next?

STUDENTS [collectively]: Sixteen and one-eighth.

MALLORY WILLIAMSON: Sixteen and one-eighth.

STUDENTS [collectively]: Sixteen and two-eighths.

MALLORY WILLIAMSON: And...?

STUDENTS [collectively]: Sixteen and three-eighths.

MALLORY WILLIAMSON: Okay, so, from here, I can then decide to add or figure out the difference in between, so we've got one-eighth, two-eighths, three-eighths, four-eighths, five-eighths. Okay. Or you can either add or subtract to find your difference. Okay. Yes, Angel.

STUDENT: Can you divide?

MALLORY WILLIAMSON: What would you divide?

STUDENT: Sixteen and one-half.

MALLORY WILLIAMSON: By what? See, that, when you—

STUDENT: Five-eighths.

MALLORY WILLIAMSON: By five-eighths. So, if you divide sixteen and five-eighths, you're dividing them up into groups. We just want to know the space in between or the difference, okay? I'm not really placing each individual amount into a group, okay? Yes, sir?

STUDENT: I found my answer in a different way from that.

MALLORY WILLIAMSON: Okay.

STUDENT: How I found my answer is, when I was doing the math, um, I had two, um, five—five-eighths plus seven-eighths, and when I added that, it was six and four-eighths, so the five-eighths and seven-eighths gave—added one and a half, and then the fifteen had seven-eighths, just as before.

MALLORY WILLIAMSON: Mhmm [affirmative].

STUDENT: So, I thought, well, if I add five-eighths, that would add the one we needed to get to sixteen and the four-eighths, which is one-half.

MALLORY WILLIAMSON: So, you grouped the numbers that were easier to add first? And then worked your way up. That was a good strategy. The last question I want to use real quick is where you plotted that. So, Jaadiay, can you grab your line plot for me real quick? Or, Mister Greenlee. Thank you. [Inaudible]. Too many Mikes. Uh, okay, so the question was, if you have five-eighths, where would you plot that? So, group five, can you three talk to me about where you decided to plot your new marks?

STUDENT: Um, where it's two-eighths and three-eighths.

MALLORY WILLIAMSON: So, you guys see where the two-eighths is and the three-eighths is. So, what's two-eighths plus three-eighths?

STUDENTS [collectively]: Five-eighths.

MALLORY WILLIAMSON: Five-eighths. What's another way we could have plotted? Drake?

STUDENT: You could have put two marks on one-eighth and another mark on the three-eighths.

MALLORY WILLIAMSON: So, I could have put two marks on one-eighth. That's two-eighths total. And then another one on three-eighths. Angel?

STUDENT: Six-eighths and twenty.

MALLORY WILLIAMSON: So, you get five-eighths. So, I—Because, when I place a mark, I'm actually adding them up. Okay. I wouldn't know how—if that would—I wouldn't know if it was a subtraction because that would be taking something away. So because I'm plotting it, I'm adding to it. So, if you have another way we can create five-eighths, Angel.

STUDENT: One-eighth plus four—No.

MALLORY WILLIAMSON: Yes.

STUDENT: Two-eighths plus three-eighths.

MALLORY WILLIAMSON: Which is what that group decided to do.

STUDENT: One-eighth plus three-eighths.

MALLORY WILLIAMSON: So, I could put a mark—an x or a plus on one-eighth and one on the four-eighths. Okay. For the sake of time, thank you so much for hanging in there. If you guys would carefully make your way back to your seats for me. One person from each group, collect your assignment and turn it in to the basket. Make sure your name and date is on it.