

STUDENT: I wanted to stay within because we're already doing in eighths. And it was six-eighths marked here, so we decided to in six-eighths.

MALLORY WILLIAMSON: And did you get the same solution?

STUDENT: We got the same solution.

MALLORY WILLIAMSON: Yeah, so—and that shows you also that they're equivalent fractions, six-eighths and three-fourths. When you get that same solution, they are equivalent. That's a great observation. All right, how are you guys tackling number two?

STUDENT: Um, um—

STUDENT: And—but does this count [inaudible]?

MALLORY WILLIAMSON: It can, yeah. A number line is a strategy that you could use—

STUDENT: I started from one to two because I didn't want to do the whole thing.

MALLORY WILLIAMSON: So, you just redrew your line plot, and you—when you redrew it, you only used the fractions that were greater than one. Okay. This isn't necessarily a model because the model will show you how you find the solution, but this still could be used to kind of show me what fractions are greater than one, okay? When you do a number line, I want to see the actual adding that's happening. So, you would start a number line off and show me the total of, like, one and one-eighth.

STUDENT: So, I just write the numbers, like these—

MALLORY WILLIAMSON: Yeah, you can write it like this. That's a strategy.

STUDENT: So, I'm done?

MALLORY WILLIAMSON: I don't know. Did your team get the same solution as you? They may be still working. Are you guys still working?

STUDENT: Yeah, I'm still working. I am now on this [inaudible].

MALLORY WILLIAMSON: Okay, so you're almost done? So, you guys are adding the fractional amounts that you saw?

STUDENT: Yes.

STUDENT: Is there another way to—that you put it into a model?

MALLORY WILLIAMSON: Yeah, there's a lot of different ways. You can draw a picture, which is very similar to what we did with this one.

STUDENT: Okay.

MALLORY WILLIAMSON: Or you can create a number line to show that you're adding those amounts. Is there one you would prefer to start over the other?

STUDENT: Well, so, could I just—

STUDENT: I would do a box—I would do another box model.

MALLORY WILLIAMSON: You're going to try to do a box model.

STUDENT: Then make it into eighths, and then—

MALLORY WILLIAMSON: Yeah, you could start a number line off into eighths, and then show me how you're adding those parts together.

STUDENT: Wait, can you not [inaudible]? Like, one times two, and I got two whole—

MALLORY WILLIAMSON: Yes. So sometimes you can multiply amounts. Why would you multiply some amounts and add the others?

STUDENT: Because adding may be different [inaudible], because one plus one equals two and one times one equals one.

MALLORY WILLIAMSON: So once—you might get different parts, okay? And then sometimes it's faster with—when you have these amounts, and there's more than one. If you want a more efficient way, you could multiply them, then just repeatedly add them, okay? All right, I'm going to give you some time to think about the models you're using, and I definitely want to come back and see what you guys came up with, because I know that you guys are about to use different models, which is okay.

Why did you decide to multiply one and one-eighth by three?

STUDENT: Because there's three one-and-one-eighth in the line plot.

MALLORY WILLIAMSON: Okay, which I can see. Is there another way we can find the total of—

STUDENT: We could add them—

MALLORY WILLIAMSON: Which I see that you did. And what did you get when you added them?

STUDENT: Oh, added this one? I got three and three-eighths.

MALLORY WILLIAMSON: So, when you're done, I want you to double check with Tanner to see if that's what you got, as well.

STUDENT: And then I'm adding the two because of the two [inaudible].

MALLORY WILLIAMSON: [inaudible] So what is question number two asking you to find?

STUDENT: To combine all the bags of candy that weigh one pound or more into a single bag.

MALLORY WILLIAMSON: Okay, so how do I know on my line plot which amounts are more than one?

STUDENT: Um, because in the middle, we have a one and then you'd add the ones that have the [inaudible] all together, or you could add them separately and, like, add ones that, like—add one that has, like, two X's, and add that to—add those two together to times—wait, one time.

MALLORY WILLIAMSON: So, you're not only adding the amounts that are listed above that fraction, but what I also hear you saying is you're adding the amounts greater than one together? So, you got a lot of addition going on. Or what did you end up getting when you multiplied by three?

STUDENT 4: Three and three-eighths.

MALLORY WILLIAMSON: Which—is that equivalent to him? Repeatedly addition—

STUDENT: Yep.

MALLORY WILLIAMSON: Yeah, so you can go either way, okay?

STUDENT: [inaudible] your total? I got six and seven-eighths.

STUDENT: And one plus one equals two—

STUDENT: Um, um, I'm not—

MALLORY WILLIAMSON: So, I'm going to—while you're waiting, what's something that you can do while you're waiting for them to finish?

STUDENT: Um—

STUDENT: Read the [inaudible].

MALLORY WILLIAMSON: Aw, he's not done with number two.

STUDENT: Oh, you gotta draw a model.

MALLORY WILLIAMSON: So, think about a model that you could possibly draw. So which one makes you feel comfortable? There's several that you could probably use for this one.

STUDENT: Wait, isn't this like an [inaudible] equation?

MALLORY WILLIAMSON: Yeah.

STUDENT: Oh, so I don't have to draw a model?

MALLORY WILLIAMSON: It's got "and." You've got to do both.

STUDENT: Aw.

MALLORY WILLIAMSON: [laughs] You've got to do both. [laughs]

STUDENT: We needed to add these—this one, this one, this one, and that one.

MALLORY WILLIAMSON: Why is it important to add all of these amounts?

STUDENT: Because—

STUDENT: Because it's more—it's one pound and more.

STUDENT: It's one pound and more.

MALLORY WILLIAMSON: Okay, so it's greater than one. All right.

STUDENT: And then we added them by doing, like, nine-eighths is equivalent to one and one-eighth, and there's—it's three times. So, we did one and one-eighth three times, and then we did ten-eighths—one and one-eighth—one and two-eighths—and then two times. And then one-fourth once. And then we add those altogether, and then we added the two pounds up from here, and got nine and three-eighths.

MALLORY WILLIAMSON: So, just to kind of—what I'm hearing you saying is that you added your mixed numbers—the amounts for each mixed number, and then once you found those amounts, you added them all together?

STUDENT: Yeah.

STUDENT: I didn't get that.

MALLORY WILLIAMSON: What did you do?

STUDENT: I just added them all at the same time.

MALLORY WILLIAMSON: At the same time?

STUDENT: I added them separately.

MALLORY WILLIAMSON: Separately? Okay. So, what did you guys end up finding in the solution?

STUDENTS: Nine and three-eighths.

STUDENT: Yeah.

MALLORY WILLIAMSON: Uh, my question to you is how could we show this with a model or a picture?

STUDENT: Oh yeah. Forgot to do that.

MALLORY WILLIAMSON: [laughs] So what model or what strategy would you guys like to try in order to find the solution?

STUDENT: We could draw, like, a circle and write one and three—I mean, one and one-eighth—well, or three and three-eighths, and then we could do another one, and [inaudible]—

MALLORY WILLIAMSON: So, what, what's a model that would represent one and one-eighth? What would that look like if I drew that?

STUDENT: One whole, and then—

MALLORY WILLIAMSON: Can you show me?

STUDENT: Oh, I know now.

MALLORY WILLIAMSON: Okay, so that's one.

STUDENT: And then [inaudible].

MALLORY WILLIAMSON: So, you just said that one and one-eighth is equal to how many quarts?

STUDENT: I'll do it next.

MALLORY WILLIAMSON: Okay. [laughs] I can come back. You're fine. Okay, so you're doing it, dividing it into eighths. Okay, so that is—is that 1 and—what, that's one and two-eighths?

STUDENT: No.

MALLORY WILLIAMSON: [laughs] [inaudible] Okay, so you can use either one. She's doing a circle, which is fine. So that's one and one-eighth, and that's also one and one-eighth. So, how many times are we going to do this to model what we did [inaudible] three times?

STUDENT: That's a lot.

MALLORY WILLIAMSON: It is a lot, but it's going to also show you the value that you're adding together. And when you shade this whole thing in, what do you want us to also know—that this is in eighths as well?

STUDENT: Oh yeah.

MALLORY WILLIAMSON: Especially since I noticed that you guys added up all your eighths.

STUDENT: Okay.

MALLORY WILLIAMSON: All right, so I'm going to give you some time to, to do that, 'cause I know that you guys have a lot of work ahead of you.