

ANTOINETTE VILLARIN: You need to record your matches on your record sheet, because that's what you're going to be using when we travel around the room to check our other answers with other people, and check our justifications with other people. So as you're matching and when you're very confident with the match, and you can explain it and your partner can explain it, you can take the match and write it on your record sheet, and then write a justification.

Your justification can be bullet points right now, okay? Does everybody understand that? Okay. There are six matches, so if you are on your second match, you want to keep going, okay? We'll check in in five minutes.

STUDENT: So ...let's... so this one starts at four centimeters at zero, and it increases. So this must be the bottom because... And then it goes down. So this one starts at six and goes down. This one might go...let's see. This one is six, too. But this one goes down, this one goes up. So this can be top and that can be bottom.

STUDENT: All right, which one would start at two and somehow decrease all the way to one second?

STUDENT: Wait, for top or bottom? Or does it matter? Oh, this one starts at two.

STUDENT: This one starts at two.

STUDENT: No, that's not two. Oh yeah. Sorry. I was looking at my line. So this one starts at two and this one does too...or that one.

STUDENT: This one goes from two seconds to one.

STUDENT: This one goes down. We need to find out these numbers. Don't get nervous. Wait. Two...did we find out these numbers?

STUDENT: I'm guessing they could go by...two seconds. Like, 2, 4, 6.

STUDENT: Let's see if, like, which ones don't have it on the bottom. These don't have a bottom, these don't have a bottom. And what has numbers.

STUDENT: These have numbers.

STUDENT: On the bottom...so, these have to, like, you know what these are. This we have to take out because we don't know anything about it.

STUDENT: Wait, I think these are a match because they go by threes here.

STUDENT: Okay, those are threes and these go by threes, and...but these don't go down.

ANTOINETTE VILLARIN: Four... let's see. 1, 2, 3, 4. So could I start with four up here, and for the bottom also start with four?

STUDENT: No.

ANTOINETTE VILLARIN: Okay, why not?

STUDENT: Because it has to equal six.

ANTOINETTE VILLARIN: Why does it have to equal six?

STUDENT: Because that's six lines.

ANTOINETTE VILLARIN: Yeah, that's how much liquid it is -- it's our *constraint*. I can't take it out. I sealed up this hole. So that's all I have in there. So when I look at these matches, even though I like what you're saying with the top and bottom, because the lines look like they're decreasing for the top and increasing for the bottom, what are you finding that you might be reconsidering? What part kind of throws a wrench in your match?

STUDENT: The time.

ANTOINETTE VILLARIN: The...what was that?

STUDENT: The time.

ANTOINETTE VILLARIN: The time or what...I mean, what's this right here?

STUDENT: Oh, the height.

ANTOINETTE VILLARIN: The height. Okay? So is this going to be a match?

STUDENT: No.

ANTOINETTE VILLARIN: Okay, so I'm going to move this. And what would be a better match for G11, knowing that there's four to start out with in the top? How many would I need to have in the bottom? What is it?

STUDENT: Two.

ANTOINETTE VILLARIN: Two. Why two?

STUDENT: Because that's how much liquid.

ANTOINETTE VILLARIN: Yeah because why... So if there's four in the top, why would I have two in the bottom?

STUDENT: So it could be even. So you could get six.

ANTOINETTE VILLARIN: So I could get to six, right? Okay, so we need to find a graph that the start situation is two, and looks like they're going upward. Do you see how I'm matching that? Yeah? Okay, so I'm going to leave you and I'll come back, but you want to start with the starting situation to help guide you. Okay? But I do like what you said about the increasing and decreasing line. That's good.