ANTOINETTE VILLARIN: I don't want to -- So anyway, you fold it halfway and you land on the same point that Zoe has, okay? Same points that you guys had, and that's another strategy. Is that any less of a strategy than Pythagorean theorem or using slope triangles? Of course not. Okay? So what I'd like you to do, okay, because we have -- I'm going to -- we have about seven more minutes, is I want to talk about justifying. Because our goal today, which I forgot to tell you at the beginning of class, is using coordinate geometry, but justifying our thinking through coordinate geometry, which I think you all did very well today. Okay? We didn't get to part two, but this is a part that I do want to talk about at least for part one. Because midpoint is a word that you haven't seen before.

Um, let me place these up here, okay? So what I'd like you to do is with your diagram -- because you're gonna turn all this in with your name on it -- is the following, okay? Justifying your work has a lot of parts to it. And we've talked about showing your thinking, drawing diagrams. But these are the things that I think are really good justification [inaudible]. You make a table and label diagram, which I see you all have. Like, how does your diagram represent the problem, okay? You show an understanding of how the elements are connected and related. Will a non-geometry student be able to look at, like, your work on slope triangles and understand what you're doing, or your slope on Pythagorean theorem and understand what you're doing? Okay? And how you communicate your thinking. How do you communicate it and convince others, okay?

So what I'd like you to do in the last five minutes, is using your strategy that you chose, not somebody else's strategy, is take your diagram, and on your Three Read handout, there's a space for you to justify. I'd like you to either write using numbers, pictures, or words, a convincing justification for how you found the midpoint. Okay? Now, if you have a hard time starting it, you can use this sentence frame. "I think the midpoints are," "I think --" blank, and then tell me why. Okay? Can we spend the next five minutes working on that, so that we can turn this in? Okay.

If you didn't finish finding the midpoints, that's okay. Just work on a justification for what your strategy is, and how you know that you located the midpoint, okay? So Monday when I see you, we'll finish this, and then continue on to part two, because today we didn't get to part two in today's class.

All right, I'll give everybody two more minutes, and then I'm gonna tell you how you're gonna turn this in. And then before you leave, I'm gonna have you check in really quickly with your partner about something that you either noticed, something that you will work on on Monday, or something that you finished doing today, okay? And you won't have to write that down, we'll just share with our neighbor before you leave.

STUDENT: How do you write it? Explicit formula for Fibonacci's.

STUDENT: I don't know.

STUDENT: Wait, explicit?

STUDENT: Yeah. Fibonacci's. It's where it's 1, 2, 3, 5, 8, 11 --

STUDENT: No, no, no, 12.

STUDENT: No, it's 13.

STUDENT: Yeah, 13. 13, 21.

STUDENT: 34.

STUDENT: So basically -- isn't that basically just like y = mx + b?

STUDENT: What? No.

STUDENT: It kind of is, because it's just --

STUDENT: No, it's a previous [inaudible]

ANTOINETTE VILLARIN: All right. If you're writing, continue to write, but listen carefully for those of you that are done. I put a stapler in your tray. You're going to keep the purple paper, because we're gonna do part two on Monday. I'd like you to staple the white handout on top of your graph paper, and then just place it in the tray. And then you keep the purple paper, and the ruler goes back in the tray as well.

And then -- one second, before you guys start moving -- and the trays are back here, you can just place them in these trays in your desks, okay -- is, before you leave, just as a quick check-in with your neighbor, because I know you have to leave very soon, is tell your partner either one thing you noticed today -- Grendel and Chenrui, shh. One thing you noticed, or one thing that you're still working on for Monday, or one thing that you finished today that you kind of now understand. Okay? So turn and talk to your partner and tell your partner one of these things.

STUDENT: I noticed that the slope [inaudible] from the middle part of the line.

STUDENT: Yeah, that's what I noticed too.

STUDENT: Because, like, if you have a square, you can dilate it by one-half and then rotate it, and then it'll find the midpoint.

STUDENT: Or you could just draw the square and [inaudible]

STUDENT: Or you can reflect it. But in order to reflect it, you already have to know the midpoints.

STUDENT: You could just rotate the whole shape by 90 degrees.

STUDENT: But it doesn't work if it's -- that doesn't work if the side lengths are already the same. I tested it.