

ANTOINETTE VILLARIN: All right, so I stopped you earlier, because you were all very eager to work quietly on the problem, but I wanna make sure that everybody knows what the question is asking you to do, okay. So Ben, can you share with everybody what the question in part one is asking you to do?

STUDENT: It's asking us to graph the points, and then [inaudible]

ANTOINETTE VILLARIN: That's it, okay, so part one's asking you to graph the points. How about in question two in part one? What's it asking you to do? Joshua?

STUDENT: Label the midpoints.

ANTOINETTE VILLARIN: Label the midpoints, okay. Does anybody know what the midpoint is? Or what -- how you would describe a midpoint? Because that might be a new vocabulary word for us in geometry.

STUDENT: Point in the exact middle of a line.

ANTOINETTE VILLARIN: Okay, the point in the exact middle of a line, okay. So what your challenge is today, is to find the midpoint using a strategy that is unique to you, and also one that you would be willing to share with the group, okay. So, part one -- oops, I'm sorry -- is asking you what the midpoint -- be ready to share how you're finding the midpoint, of that segment. How do you know that's the midpoint? And can you find the midpoint another way? Those are questions that I really want you to think about, okay. Because our goal today is to start to use coordinate geometry to justify your thinking, okay. So as you find midpoints, be ready to share your strategy. Be ready to tell me how you know that's the midpoint, and then I'd like you to record as much as you can on your graph paper and on your handout that we did the Three Read in, okay. I also want you to do this together. So as you work, I'd like you and your partner to have a strategy that you both agree on, and I'd like you to share that, okay. Can I give you seven minutes to work on part one? Yeah? Okay, seven minutes, work on part one.

STUDENT: No, it's not even.

STUDENT: It's not even.

STUDENT: Isn't it like a parallelogram ...

STUDENT: No, it's not a parallelogram.

STUDENT: Just ignore this triangle, I just have to figure out the slopes just for the sake of that.

STUDENT: Yeah, I think I got the same shape as you, so.

STUDENT: Yeah, I just need to solve for slopes now, so, that's that.

STUDENT: Okay.

STUDENT: I forgot, how did you find the decimal?

STUDENT: Uh, what's the number?

STUDENT: Wait, you're gonna do the a squared plus b squared ...

STUDENT: I did it the hard way, look. You do this ...

STUDENT: What are you doing? Is that ... A and B?

STUDENT: That's slope. This is B.

STUDENT: It's 14 and 8. It's a triangle.

STUDENT: Sorry. Ah, my brain's not working, I told you that. What is it? 208?

STUDENT: 208, square root.

STUDENT: 14.4222

STUDENT: But then that would be nine units.

STUDENT: I don't think that really works though, because you can find the length but you don't know where it is, on the point -- on the graph.

STUDENT: True, because it's not a straight line.

STUDENT: But like, you can just guess, because we got the right answer.

STUDENT: But they're not asking you how -- the length is, they're asking you where it is.

STUDENT: So, I would get this, because it would be the hypotenuse of these two sides.

ANTOINETTE VILLARIN: Okay.

STUDENT: Yeah.

ANTOINETTE VILLARIN: And then, how would that help you find the midpoint? Like, where ...

STUDENT: Well, I know the distance and then, use a ruler? And then use their method.

ANTOINETTE VILLARIN: Use a ruler, okay, okay. Okay, use their method. So what are you gonna do with that hypotenuse, then?

STUDENT: Just find the length of it, so then I can divide that by 2.

ANTOINETTE VILLARIN: Okay, all right. So be ready to share that if I call on you. Nice, I'm seeing two different strategies so far, okay. I'm coming around to see your other strategies.

STUDENT: Look, I'm gonna go -- I'm gonna do the measuring to the Pythagorean theorem.

STUDENT: Okay.

ANTOINETTE VILLARIN: Okay, so you're gonna do some measuring?

STUDENT: Yeah, and then you just jot it on.

ANTOINETTE VILLARIN: Okay, all right. Thank you, be ready to share that, okay.

What's our strategy here for finding the middle?

STUDENT: Andrew thought of, like, using the slope?

ANTOINETTE VILLARIN: Ah, okay.

STUDENT: And just sorta, try and find two slopes and then ...

ANTOINETTE VILLARIN: Aha, so could you actually draw in the two slope triangles? Okay.

STUDENT: Okay.

ANTOINETTE VILLARIN: Okay, and when you find the slopes, how do you know that that would give you the middle?

STUDENT: So basically, when I find the slopes, these two, they have to be the entire length, but then also if I just find one and where they sort of intersect here, that means that that would be the middle since each one of these is half of this entire line.

ANTOINETTE VILLARIN: Mhm, ah okay. So you're using slope, okay. Be ready to share that strategy. All right, I'm coming around to each group just to hear some of the different strategies. So far I've heard two different ones, okay. But I'll give you guys three more minutes before we start to check in and share. Now don't forget to label, okay.

So I'll, maybe I'll -- should I share first and then have them go back and justify their work? Okay, yeah.

Did you two have similar strategies or different strategies?

STUDENT: I don't know.

ANTOINETTE VILLARIN: You don't know?

STUDENT: Same.

ANTOINETTE VILLARIN: Same. What was your strategy, Sannie?

STUDENT: [inaudible]

STUDENT: We had different strategies.

ANTOINETTE VILLARIN: So you're using the slope triangle? Okay. Divided by 2? And then Leia, what strategy are you using? Slope triangle like Sannie?

STUDENT: Yeah.

ANTOINETTE VILLARIN: Yeah? Okay. What is your slope triangle for like, the first one? What'd you guys get for AD?

STUDENT: I got ...

ANTOINETTE VILLARIN: Triangle for AD. Like Sannie, what was your slope triangle here? Did you actually -- oh, you didn't do it? Which one did you do? Okay, what was your slope triangle for AB?

STUDENT: So you guys got 6 and 18?

STUDENT: Well, 6 and 16 for this. And then we divided by 2 for each.

ANTOINETTE VILLARIN: I'm gonna give everybody one more minute before we stop and check in, okay. I know you're not done, but I do wanna check in in one minute.

I was also hoping somebody would fold it. But nobody's done that yet, so, that might be one, yeah. Yeah.

STUDENT: This is what my graph looks like now.

STUDENT: What? Oh, you have to make a square with those?