ANTOINETTE VILLARIN: Oh yes! I saw a couple of you as I walked around—what was his friend confused about? His friend said, "12 inches." There's not... 12 inches. What is his friend confused about? Okay? David?
STUDENT: He confused the area and the perimeter.
ANTOINETTE VILLARIN: He confused the area and the perimeter. Can you explain a little more?
STUDENT: He thought the perimeter was the area.
ANTOINETTE VILLARIN: He thought the perimeter was the area. Can you tell me why 12 inches might be the perimeter?
STUDENT: Because it's 4 sides.
ANTOINETTE VILLARIN: It's 4 sides
STUDENT: and 3 inches each
ANTOINETTE VILLARIN: And 3 inches each, so he went 3, plus 3, plus 3, plus 3? And got 12 ? Okay. Thank you. Do you guys agree with David? Yeah? Okay. Um, okay! So let's go on to the next question. Okay? l'd like you to focus on proving, not just your calculations, 'cause you guys did really well on your calculations as I walked by. But tell me who's correct in this next problem? Robbie thinks the area's 28 square inches, and his friend says it's 22 . Tell me who you agree with, and why. And show me a picture that justifies your answer.
ANTOINETTE VILLARIN: As you finish, I'd like you to share your response with your partner and see if you agree.
PATTY FERRANT: So what does the 28 mean? What does the 28 actually mean?
STUDENT: It's the area.
PATTY FERRANT: And can you prove it? Can you show that in the picture? Yeah.... Nice.
ANTOINETTE VILLARIN: Don't forget to share with your partner! Remember, we want to hear your thinking!
PATTY FERRANT: Nice. And then what do you have there?
STUDENT: What?
PATTY FERRANT: What do you have there?
STUDENT: 1,2,3,4,5... (inaudible) 28.
PATTY FERRANT: 28? 28 squares inside? So that's the area? Or the perimeter?
STUDENT: It's the area.
PATTY FERRANT: Sure! And you proved it! So then, what's his friend thinking? His friend said, what did his friend say?
STUDENT: That the area is 22.
PATTY FERRANT: And do you agree?
STUDENT: No.
PATTY FERRANT: No. What was the friend confused about?
STUDENT: I think it's because he, um, accidentally added.
PATTY FERRANT: So if he added, what did he find? What was he doing?
STUDENT: Um, figuring out the perimeter?
PATTY FERRANT: Maybe, yeah! Can you figure out the perimeter, then?
STUDENT: Yeah.
PATTY FERRANT: What's the perimeter of that?
PATTY FERRANT: So what was his friend thinking?
STUDENT: That the area was...that you're supposed to add.
PATTY FERRANT: To find the area? So then, you just proved that this is what?
STUDENT: 22.
PATTY FERRANT: And that's the..
STUDENT: Perimeter.
PATTY FERRANT: The perimeter? Can you show me the perimeter on that? Show me the perimeter on your rectangle.
STUDENT: How?

PATTY FERRANT: I don't know. How can you prove it? ‘Cause you proved your area for me. Do you know how to prove the perimeter? What did we do with the first picture?
STUDENT: We colored the outside?PATTY FERRANT: Sure. So could you show me the perimeter?
STUDENT: Like this?
PATTY FERRANT: Yeah! Perfect! Great! I just wanted to make sure. Wonderful! Good job. Good job! Make sure you share. And make sure with your partner, too.
PATTY FERRANT: Ah! I like your proof. What did you do there?
STUDENT: I... um, showed the numbers, the number in square inches, and added the numbers, like, 28 ?
PATTY FERRANT: So you actually counted 'em, huh? So then you agreed with... Robbie?
STUDENT: Mmm hmm.
PATTY FERRANT: Yeah? And so what was his friend thinking?
STUDENT: I think his friend was thinking....Yeah. I think he was counting the perimeter instead.
PATTY FERRANT: Mmm hmm.
STUDENT: ‘Cause 7, ‘cause... he was adding instead of multiplying.
PATTY FERRANT: Mmmm!
STUDENT: He was adding all the length and width.
PATTY FERRANT: Absolutely! Good job. I like that proof.
ANTOINETTE VILLARIN: Did everyone have a chance to decide who was correct? Either Robbie or his friend? Did you share with your partner? Yeah? So who'd like to tell me? I called-- Lorraine?--up, and she drew some pictures for me. Can anyone tell me what she did? What did she do...hmmm. Maybe somebody that hasn't volunteered yet today? No one wants to try? No? Okay. Talk with your neighbor. Talk with your neighbor really quickly and talk about what Lorraine did. So maybe after you talk, I might get some new hands up.
STUDENT: Uh, the square inches for the
PATTY FERRANT: the square inches? Sure. So then, what's the area of this rectangle?
STUDENT: 28.
PATTY FERRANT: And how do you know?
STUDENT: Because of the square inches.
PATTY FERRANT: How many... so, what are you looking at? The square inches... you're actually looking at... what's inside.
STUDENT: The area?
PATTY FERRANT: The area? And what's the area? What actually is it? What do you see?
STUDENT: Um, um...
PATTY FERRANT: How did you prove it? Like, what did you draw inside?
STUDENT: Uh, squares.
PATTY FERRANT: Those squares. And how many squares are inside?
STUDENT: 28.
ANTOINETTE VILLARIN: Okay, who would like to tell me what Lorraine did? Someone who hasn't gone yet who'd like to share? How about, is it, Desiree? Angelique? Connie? Okay, Connie. I have a seating chart here, so I apologize. Okay, thank you, Connie.
STUDENT: She put 4 rows and 7 columns...
ANTOINETTE VILLARIN: Okay, why?
STUDENT: Because it's, 4 is the height, and 7 is the width.
ANTOINETTE VILLARIN: Okay. Good. So inside, she drew what? What shape do you see inside?
STUDENT: Squares.
ANTOINETTE VILLARIN: Squares! Okay. Now why do you think I gave her red? Why did I give her the color red? Why didn't I give her the green pen, the green pen? Desiree?

STUDENT: Because green's the perimeter.
ANTOINETTE VILLARIN: Okay, and red is...
STUDENT: the area
ANTOINETTE VILLARIN: Is the area. Good! Okay.

