PAM BROUSSEAU: And how effective do you think it was where sometimes they were given the area and they had to find the dimensions, other times they were given the dimensions and had to find the area, and at the same time we're working with polynomials and they're not -- they don't have ownership of that piece either?

MELISSA NIX: Right.

PAM BROUSSEAU: So, how effective do you think it was, uh, here's the area, find the dimensions; here's the dimensions, find the area. How do you think that that helped with both the cognitive demand and their sense-making?

MELISSA NIX: Um, well, I think it starts to solidify how these are, how the interplay between those really work, because I mean ultimately, we want to get them to the point of being able to multiply polynomials. So, if you're looking at the total area, that's a good context for the procedure of multiplying polynomials. So, we ultimately want them to see that these two dimensions multiply to get to that final area, and likewise, this final area is the product of the factors or of those dimensions, so that inverse operation of division.

So to start the lesson in that sequence where it's kind of just that you've done distributive property before from 7th grade, from 6th grade, and this is kind of distributive property with the $2z$ and the z and the 8, and then what does that look like together and how do you represent that visually? Because again, I wanna go back to a visual model to tie into what they've already been doing. I think it was a really good way to segue that lesson, especially with the pink rectangle because that -- some students thought I was going to ask them for the area, and yet the area was what was provided.

PAM BROUSSEAU: Mm-hmm. [affirmative]

MELISSA NIX: So, that got at that misconception right away of, like, okay, what's what? It's the sense-making. Oh, those are the dimensions. Oh, those are the area. Oh, that's my final product. Oh, these are the factors that multiply to that product. And so, it's gonna take some more work, but I think, um, they were making some sense of it as they went.

PAM BROUSSEAU: You mentioned structure. I saw a lot of using structure to solve problems. Lots and lots of practice with that and recognizing structure and how structure, um, can be utilized …

MELISSA NIX: Mm-hmm.

PAM BROUSSEAU: ... to solve problems.