Connecting Student Work to the Goals of the Lesson— Part 1

EMILY: I focused using Stage 4, and I just kind of cut that in half, and then did that. And then I noticed that if you add all the whole ones up, you're going to get 6. And then if you combine these two, you're going to get 7, and then you combine those three, you're going to get 8. And then you take half of what the stage number is, which is going to be 2, and then you're going to add it to that, and then you get 10. And that's what stage 4 comes up to.

TEACHER: No no, Stage 4--

EMILY: Stage 4 is 10 total squares together. So that's how we kind of went off from doing that, and then we found out more with it.

AIDAN: So the equation that we got from it ended up being y equals length times width divided by 2 plus 1/2x.

EMILY: And the x is what stage it is, so like, the unsolved stage, if that makes sense.

TEACHER: Would you mind writing that? You defined your variable as what?

EMILY: So x equals stage number, and then y is going to be the number of squares.

TEACHER: All right. So your x is your stage number,and your length and your width?

AIDAN: The length and the width would be-- all right, so say for example, like we did Stage 4, the length and the width would both be 4, because the length, or-- 1, 2, 3, 4, 1, 2, 3, 4.

TEACHER: I'm hearing some questions for you, Aidan.

ARAIA: I was just saying-- like, everything's correct because your length times width would just be x squared.

MICKI: Yeah, our main goal was to just kind of figure it out. I guess it wasn't as precise, but yeah, we get it.

TEACHER: So what was she saying about the length and the width? What could we call those in terms of the variable you're using?

AIDAN: x squared, because the stage number for, like, 4, the length and the width are both 4. So we could just do x squared.

TEACHER: At your tables, turn and talk and see if that would work for the other stages, as well.

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STUDENT: 2x squared, so divide by [INAUDIBLE] x. 2 is [? 4 ?] divided by 2 plus 1/2 times 2, so this will be 4 divided by 2 equals to 2, right? Then 1/2 times 2 equals to 1.