

# READING WRITING IN THE DISCIPLINES

## Real World Mathematics Collaboration Video Transcript

### **Stephanie Brown:**

So I want you guys to start with this warm-up today. I have you guys working with partners.

In addition to learning the standards for mathematics, I want my kids to learn the soft skills of just problem solving and working together.

So with your partner, I want to see how far you guys can get working through this. I'm just going to walk around and check your work. We're going to spend about five minutes working on this, and then I'm going to call some of you guys up to the board. So start to develop your equations. Go ahead and get started. The reason I chose this warm-up is because I read your papers over the weekend and I noticed that this is an area that is still causing problems for some of you: developing your system of equations. And we're going to need to do that for these proofs that we've been looking at.

There was a common thread. They were weak in proving that the large polygon is a square, and the way they needed to do that was to determine if all of the angles were 90 degrees, and the only way that could be achieved is by using a system of equations.

So start to develop your equations. I want to see what you guys can get through right now.

### **Student:**

We'll just leave this reason blank and then just keep going with the statements and ask her later.

### **Brown:**

When I talk about soft skills, I'm talking about collaborative work, how do you work in teams, because that's the real world – you have to work in teams and you have to share the leadership.

### **Student:**

I don't get how you find  $x$  and  $z$ .

**Student:**

Wouldn't you subtract it?

**Student:**

Where do we put that second to show...?

**Student:**

It's not here.

**Student:**

But then for the given, where it says "x is twice the measure of z," what do you put down next after that?

**Brown:**

I find when they use the whiteboard, they're not as fearful of making mistakes. There's no permanency in the white board, you can erase it quickly, and I think kids feel comfortable using it because they know that they can correct something immediately. Whereas the paper, it's a little bit tougher to do the erasing and it's permanent there, with the whiteboard, they can kind of feel around for their understanding.

**Student:**

If x is twice the measurement of z...

**Student:** So you would do x equals 2z?

**Student:**

Yeah. And then you would put it for the x?

**Student**

Yeah.

**Student:**

So you'd do 90 plus 2z? 90 plus 2z equals 180?

**Student:**

Yeah.

**Brown:**

You get great results when you have kids sitting together, thinking things through together, asking each other questions, clarifying things for each other, and that's where you see the real learning take place, and so that's why I had them work together in partners, because I wanted to facilitate that.

You guys have about 30 more seconds. You guys are on the verge of getting it.

**Student:**

Wouldn't it just go right into substitution?

**Student:**

That's what I thought. I guess I'm missing something with...

**Student:**

If I don't understand something and I think about it and then I start talking about it more, then it'll click in my head and then I'll be able to learn it.

**Student:**

90 plus z times 2 plus x equals 180.

**Brown:**

What I need you to do is I'm going to call some folks up to the board to help build these equations. Emma, can you come up to the board and build equation one for us, please?

The reason that I had them come up to the board is because I like to do cold calling. I want everybody to be on their toes.

Awesome. Aaron, looking at what Emma wrote, can you build on that and give us another equation that's true about this problem?

I want all the kids to be accountable for their learning.

Christian, do you think you can come up and build the third equation?

So when I cold call them and have them come up to the board, I just want them to own the problem.

Brendan, can you come up and work us through the next step? What was it that you did?

**Brendan:**

I used the Triangle Angle-Sum theorem, because I know it equals 180.

**Brown:**

So how did you know to put this there?

**Student:**

Because it was given.

**Brown:**

Great -- so you took this, you put it in for there, and that's called what?

**Student:**

Oh, what's it called?

**Brown:**

What's it called, class? Help him out.

**Students:**

Substitution!

**Brown:**

So write that down.

I want to make sure that everybody in the group understands the purpose and the task and everybody had a hand in the product and getting the work done.

We'll continue to work on this. This is a trouble spot that I noticed among many of your papers that I looked at on Friday.