BARBARA SHREVE: ...actually did you notice, have two different answers?

STUDENT: From where to where?

BARBARA SHREVE: For the second one.

STUDENT: Oh, no, no. I messed up. It's for this one.

BARBARA SHREVE: Oh, okay. You just wanted to change your mind. Okay, we talked about that one. And like (inaudible) you start with putting in zero and factoring. So do you guys know what it means to find the roots?

STUDENT: Yes.

BARBARA SHREVE: What does – what is a root?

STUDENT: So basically find...when you put that like...what is it called? When you distribute? When you distribute all the numbers into each other? That's basically what you want to find.

BARBARA SHREVE: Actually no. So...we haven't talked about this before either, right? So it is a little bit of a trick in there. A root is another word for x-intercept. So it's another way of saying "Find the x-intercepts." Okay? That's what the roots of a parabola are. So in a problem like this, would you want to multiply it in order to find the (inaudible) or would you...what's your next step? What do you usually do to find an x-intercept?

STUDENT: I multiply it. I factor it out.

BARBARA SHREVE: You factor it out, right?

STUDENT: Yeah.

BARBARA SHREVE: And this is already factored. So would you multiply it and then factor it again?

STUDENT: No. You can just figure what x equals and x on this side equals.

BARBARA SHREVE: If you already know it equals to what?

STUDENT: Zero.

BARBARA SHREVE: So you have to put in the zero. So on a "find the roots" problem, the first thing you want to do is to make sure that it equals to zero.

STUDENT: So it would equal to zero or what do you mean?

BARBARA SHREVE: So if we're looking at a problem like this, it's saying find the roots of it, right?
Y equals this, so this is just the question. The question mark's from the question. But I'm saying, so if you're trying to find the roots, what we need to do first is be able to solve it...

STUDENT: It equals to 5 or what do you mean?

BARBARA SHREVE: Yeah, we're going to do that equals 5.

STUDENT: So would it be this one instead of that one?

BARBARA SHREVE: I'd actually match it up to this first one because that's where the zero is matching that equation.

STUDENT: That means we gotta switch some stuff around.

STUDENT: Can we just get another one?

BARBARA SHREVE: No. You're close enough. So can you just take a quick peek...you said with this one you just put in a zero right? And factor it? So where else have you just put in a zero in this one?

STUDENT: Here.

BARBARA SHREVE: Yeah, so these two things that you wanted to have matched, I think we just need to switch them, so that you're only doing the first step. You guys are thinking a couple of steps ahead in a really good way, so you're not really doing anything that's...it's hard to sometimes figure out how to stop after the first step. So you're not doing anything that's making me worry that you don't know what you're doing; you're doing things that's just like, it's hard to stop after just one step. But this isn't making sense to you yet, I could tell from your face. So we matched this one with this one, so what's the difference between these two?

STUDENT: The zero equals.

BARBARA SHREVE: Because you wanted to go to this step saying x=5 to make that zero right? So the very first thing you have to do is make this equals to zero. And so we changed this one instead of matching up here, to match one that looks a little bit more like that. Does that make sense?

STUDENT: Yeah.

STUDENT: So everything else is all right?

BARBARA SHREVE: Everything else is awesome. Awesome! Okay? So do you want to take a look at the back? This time again, you don't have to do the whole problem; you have to decide what should the answer look like. Okay?

STUDENT: What should it look like?

BARBARA SHREVE: So you could trust that, like, I'm not trying to mess you up with the numbers, but you need to decide, is it an "x equals" answer, is it a point, or is it factors? Okay?

STUDENT: So what is it again?

BARBARA SHREVE: You want to… You don't have to do all the math. You want to take each problem over here and figure out what is the final answer going to look like. So should it be an "x equals" answer, or should it be just factored, or should it be written as x,y x,y.

STUDENT: So we have to do the same thing on the back?

BARBARA SHREVE: Just matching to answer some set of first steps.