Chrissy: And then this was my graph. And I don't know, I think it was supposed to be a parabola, but I didn't exactly know how to make it a parabola.

Ms. Mulligan: OK, that's what I was going to talk about. You think it was supposed to be a parabola.

Chrissy: Yeah.

Ms. Mulligan: So, what happened? Why not?

Chrissy: I don't know why. Usually, 'cause when there is like a parabola, it like goes on this side and then like you can do the same thing on the other side. But it doesn't really match up. You know. Maybe you have to move it over more.

Ms. Mulligan: Katherine?

Katherine: Um, well, I think that it's cause like you connected them, like the one from 3 to -3.

Lauren: And it would be more like this [traces the shape of the graph in the air]

Katherine: Yeah, it would usually go down to like zero.

Ms. Mulligan: Can you fix that on the fly, Chrissy? Do you think with advice from other people, could you think about it? Or is it too much pressure?

Chrissy: No, I can.. –

Ms. Mulligan: You can handle the pressure?

Alessandra: [inaudible]

Ms. Mulligan: What's that Alessandra?

Alessandra: So what do you think it's supposed to look like? Or, how, 'cause it's supposed to go through zero?

Chrissy: I guess it…

Ms. Mulligan: Is it? I don't know.

Alessandra: I don't think so.

Alex: Well, the case of zero, exactly it'll go through like zero zero.

Patty: Zero minus zero.

Chrissy: Oh man.

Alessandra: If I include zero [inaudible]

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Val: I think ‘cause if you, if you use zero as your x [inaudible]

Nico: Zero, zero. Zero’s where it bounces [inaudible]. It should pass through.

Alessandra: Because the way it [is] in there it should go through zero...x zero is y zero but the thing is -3 is near the dip point to [inaudible] parabola, it, it would be the same

Monique: It doesn't bounce at zero.

Chrissy: Right, that's about

Alessandra: It's [inaudible] out

Ms. Mulligan: Hey Nico, Monique just said something. Monique, tell Nico what you just said.

Monique: It doesn't bounce at zero. It bounces at like negative, like .2, or negative

Sarah: Somewhere around there.

Jane: That’s like 3 [inaudible]

Maddie: Wouldn't it at zero, because zero squared plus zero equals zero?

Alessandra: Yeah, but, that's true but -3 and 3 aren't the same. It's supposed to balance out.

Tracy: Like it's supposed to be symmetrical? Like if we [inaudible]

Alessandra: Like, the whole thing, if you cut it in half and you flip it over it would look the same.

Anna: Also in this one though like-

Ms. Mulligan: What's she saying, Nico, I, I want to hear from you too...Nico, what's Alessandra saying?

Nico: Um, so it's a parabola so that means, um, on both sides, on the negative side and the positive side, the, the y coordinate numbers should be the same for reverse, like, -3 and 3 should both be 12, but since -3 is 6 that means it doesn't balance, so it bounces lower.

Ms. Mulligan: OK. So Anna, what were you going to say?

Anna: I was just going to say that, um, like our graphs are kind of inaccurate because, like, just because you're drawing it out on graph paper and it's like not the same as, like, especially with our scale. 'Cause we're going by one intervals rather than, like, decimals, so it's not gonna be as perfect as we want to do.

Ms. Mulligan: OK. OK, Have you figured out a way to, sort of, enhance your graph?

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Chrissy: Well, I would agree like with what Maddie said, like we can start at, like, zero and go, like, we can follow the rule, you know, zero squared plus zero, and that gives you, the point would be (0,0). So it'd be right at the origin.

Ms. Mulligan: OK.

Chrissy: And then, I don't know, I was going to do it with -3. So like -3 squared is 9, plus 3 is 12.

Ms. Mulligan: Wait. Plus -3, right?

Chrissy: Yeah, ok, sorry. Um, so that would be 6, right? Oh, wait, it already gives you that.

Ms. Mulligan: Yeah.

Chrissy: So, I don't know.

Ms. Mulligan: Choose some other points.

Chrissy: And then, um -

Chris: What's 1?

Nico: Yeah it should –

Tracy: Yeah I think it's, I think it's like going like (swish).

Alessandra: Maybe choose zero.

Lauren: Like 1 squared plus 1.

Nico: Yeah.

Chrissy: I'm confused.

Ms. Mulligan: OK, somebody, unconfuse her.

Monique: I did it on the graphing calculator.

Ms. Mulligan: Can you unconfuse her without the graphing calculator?

Monique: Well because, since it crosses the x-axis at both -1 and 0, that means the dip is somewhere in between there, below zero on the y axis. [motions a dip]

Rachel: Yeah.

Sarah: Um, like .5

Nico: Oh, like yeah.

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Chrissy: Wait, say that again I didn't hear you.

Monique: So like the dip, or where like it bounces, would be between like well zero and -1, comma zero. Like the dip, like through the, the point there. It'd be like -.5, -.5.

Alessandra: Yeah, it'd be negative, probably -1, -.5 or -1 or -2 or something like that.

Chrissy: So you're saying like. I don't know, you'll have to like show me, 'cause I don't know what you're saying.

Monique: OK, put, put.

Ms. Mulligan: Can you go up there and show her?

Monique: [Goes to the overhead] Like I know it's not at (-.5, -.5) but, it's before the, you know, -.5 and down -.5. So the bounce would be like right there, so that way when you connect. 'Cause it's a lot smaller than that, but like. So the dip would essentially be like that and go up like that way and that way.

Jane: So you can't find it exactly.

Ms. Mulligan: OK, can you just graph it? Like, what would it, what would it look like, then?

Chrissy: So how does it like explain the discrepancy, though, like, from side to side?

Monique: So because the, like the, where the bounce is it would be like right there so this half. Like, it's, it's a very fine line cause it's a really small number, where it bounces. So this half would be symmetrical to that half. That's why both of these points right here [points to them] are zero, because it bounces there. So they both have to touch it, so it wouldn't bounce at zero, it goes up [inaudible]

Chrissy: So you're saying that's why they're not symmetrical is because it's not exactly at zero?

Monique: Yeah. It's not exactly.

Sarah: Well it is symmetrical just not from zero.

Nico: It is symmetrical…

Monique: …But not at zero.

Chrissy: Not at zero, just over.

Sarah: Not the actual zero.

Nico: Yeah, like moved over.

Chrissy: OK.

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