**Appendix A – Transcript of WCD9**

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| W78 | Instructor | Guys, so… Let me ask, let me ask the class a question. This group here has been talking about area and perimeter, can you do recount… Wait, first of all, you said area… you did some computations, and you just conceptually thought the area was going to… |
| W79 | Joy | Zero |
| W80 | Instructor | Zero, right? Okay. And then tell me about… about the perimeter. Tell us about what… Because you guys had different ideas. |
| W81 | Jen | Yeah, mhm |
| W82 | Instructor | So tell us about… Carmen, tell us about your idea, and then Joy, tell us about your idea |
| W83 | Joy | Okay |
| W84 | Carmen | I was thinking if we keep zooming… Okay, for our area thing, we were going to keep zooming in, keep coloring in, so eventually we're gonna color all in. It's going to be black, so there’s no area, so there's nothing to… No area there’s nothing to put a fence around it. So, there’d be no perimeter... and then |
| W85 | Instructor | So Carmen is thinking that the perimeter then would be zero, because there's no… There's nothing left to put a fence around. And Joy, you were thinking what? |
| W86 | Joy | I kind of thought it's toward the opposite end - like, if you zoom in there's more to fence, and if you zoom in there's more to fence, and you just keep putting in more fencing material, because as you zoom in there's more and more to fence. Until... Except that you'd fill in the triangle, to some extent. |
| W87 | Instructor | Great. So Elise’s got a question for you. Go ahead, Elise |
| W88 | Elise | So, what I feel, like, what Carmen’s saying is when you zoom in… Or she says you color it all in so it's all black, but… What you're coloring in, is perimeter, to some extent. Not totally, because it's also area. But, like, every time you build a little triangle, you have more perimeter in there, right? So, then, all those... I don't know... Does all the black become all the tiny little pieces of all the tiny triangles? |
| W89 | Kevin | So what… So the, the perimeter is… also can be considered the perimeter of the black. Part of the perimeter is the perimeter of the black. ‘Cause see, when you… When you shade it in, you're adding the perimeter of the black. |
| W90 | Carmen | Oh, I see what you're saying - so it's actually, like, it's a… the fence is guarding both properties. |
| W91 | Kevin | Yeah |
| W92 | Carmen | Not just yours, but it’s doing the other one too. Ok that makes sense haha. |
| W93 | Instructor | Soo, can you explain with your own words, what this conversation is about, between Kevin and Carmen? |
| W94 | Soo | Umm… I think… Umm… Joy is saying, like, you keep zooming in you're going to get more triangles forming, so you have more areas, so you keep adding the numbers, right? And Kevin is saying… I didn't really follow what he said. |
| W95 | Instructor | Curtis, you were nodding your head when Kevin was talking. Can you say a little about what you interpreted Kevin to say? |
| W96 | Curtis | Yes. Kevin… Umm… He was saying, like, a… That, well… Carmen's issue was that the… |
| W97 | Soo | I understand Carmen |
| W98 | Curtis | There was no area to the… Yeah. But then, umm, Kevin was saying that the perimeter of the… the white is also the same as the perimeter of the… perimeter of the black part. So, since there’s area… There is some area of the black… But we didn’t talk about that. There could be a... |