

**Tips**

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**Discussion around 4.NBT.A.1 Task (Part 1)**

T: Alright, so Tessa, tell me what you did.

S: So, I compared 350 by 35. With 5...

T: Ok.

S: I think I said that already.

T: Ok, I think I know what you did. So, you said 350 was bigger than 35.

S: Yes.

T: Then, you subtracted, and you told me that it would be like... the difference is 315?

S: Yes, but then I...

T: Ok.

S: But... first it says the three digit in John's number is 30 because it's in the tens digit. And then the 3 digit in Ben's is 300 because it's in the hundred's place...

T: Ok.

S: But, and I did this (showing her work on the page).

T: Oh, I see what you got up there now.

S: 300 minus 30 is 270.

T: Ok.

S: And I figured out the distance between.





**Discussion around 4.NBT.A.1 Task (Part 2)**

T: The distance between. Ok, so what I'm going to ask you to do... You did some really smart thinking by thinking that the 350, or the 300 is bigger than the 30, right? So, could you compare those with multiplication, you think? (pause) So, like... let me... I'm sorry. Let me phrase it another way. So, if I said, "How many times greater is 300 than 30?"

S: Well, it's a hundred times greater, I think.

T: It's a hundred times greater?

S: Well, I have to work this out.

T: Go ahead. Yeah, you can work it out.

T2: Yeah.

S: So, I'm going to do my area model because that's the way we've been practicing.

T: Ok.

S: So, it's a little easier for me.

T: Alright.

S: So, I can just do 30, 0, then I can break it up into my 3's, This one will be 300, 0, 0. I didn't have to do that. I said 3 times 3 is 6. Add the three zeroes which is gonna be 6,000. And then zero, zero, zero, zero, zero.

T: Ok, so, I'm asking, I actually think you're multiplying 30 and 300. What I'm asking you to do is to compare them with multiplication. So, think, like how many times bigger is 300 than 30?

S: Oh, so, is it kind of like skip counting like 3 to 30 to see how many times greater? That's how I usually find how many... how greater it is.

T: Show me what you mean.

S: Alright, so sometimes I skip count to like... if I'm doing my 2's I probably, I usually do 2, 4, 6, 8, 10, 12. It's gonna be six times greater because 6 times 2 is twelve.

T: I got it. So 2... because you had 2, and you were trying to compare that to 12, so you skip counted 2, 4, 6, 8, 10, 12 and that would make 2 six times bigger... or 12 is six times bigger than 2 then. Is that right?

S: That's how I would do it.

T: Ok. So, how would you do that thinking with 30 and 300?

S: Well, I can pr... I'm not sure that 3 is a multiple... is a fac... multiple or factor, I get those confused.

T: That's alright. I think I know what you mean.

S: Is a factor of 30. I'm not sure, but I know 6...

T: Could you test it out and see?

S: Alright, 3, 6, 9, 12, 15, 18, 21, 24, 27,... 21, 31. It skips right over that. Wait, no...

T: It does? Do it again one more time.

S: I... That's what I'm saying. 3, 6, 9, 10. 3, 6, 9, 12, 15, 18, 21, 24, 27, 30. So, it's gonna be 10 times 3. So, now, it would...

T: So, what does that mean for our problem then?

T2: Good. Alright.

S: So, that means, huh... I don't know.

T: You don't know?

T2: I think you know. Let Mr. Jones say his question one more time.

T: I think you did. So, when you did that thinking... I'm going to go back to the easier problem cause I like that sometimes. Like, you did by 2's, right, and when you got to 12 you did six counts so that meant that 2, er... 12 was 6 times bigger than 2. So, if you use that same thinking with this problem what would it mean then? Cause you skip counted by...

S: Threes.

T: Threes.

S: Ooh, that probably means that it's a hundred times greater because if... I meant... No, it would probably still be ten because even though I'm adding an extra digit doesn't mean that it's gonna be like a hundred now. It's gonna be like 30, 60, 90,...

T: Ok.

S: ...180, and stuff like that.

T: Gotcha.

T2: There you go.

T: So, what would that mean then?

S: That means it would still be ten times greater because... just because you're changing the digit, like adding a zero to like the 30.

T: And that's why you were skip counting by 3's?

S: Yeah.

T: Ok.

S: If you add the zero to the 3, that makes it 30, doesn't mean it changes the, um... the mult... the times greater.

T: Gotcha, gotcha. Ok. If you were just using 3's...

S: Even if it's 3,000 compared to 3,500 it's still going to be the same I think.

T: You think? Ok. But you know for this one... so, how many times greater would 300 be than 30?

S: Ten.

T: Ten times bigger. Could you write down some of your thinking on your paper for us too? Try to put that in words the best you can.