

## Calling Plans Task, Part 2

Teacher: Elizabeth Brovey

District: Pittsburgh Public Schools

Grade: 8

Clip 1

### EXPLORE PHASE (Individual)

- 1 *Teacher:* I want you to take 5 minutes by yourself, quiet, to write down your thoughts.  
2 Can you tell me what you're doing?
- 3 *Student:* I'm just trying to go to 50 and see if it's the same.
- 4 *Teacher:* Okay, and I interrupted your counting. I'm sorry. What did you start off with?
- 5 *Student:* 150, \$1.50.
- 6 *Teacher:* Okay. And then would you . . . what are you doing?
- 7 *Student:* I was trying to go by 15 cents.
- 8 *Teacher:* So, if that is your company C, than what's your company C's phone plan in  
9 words?
- 10 *Student:* Um, start off \$1.50 monthly and then 15 cents each minute.
- 11 *Teacher:* Okay. Good. I want you to let me know if that works out. If it works out, tell me  
12 why. If it doesn't, tell me why. Okay? I'll be back.
- 13 *Teacher:* Can you tell me what this equation means?
- 14 *Student:* It means that the company in C, the rate is 12...0.12 cents, but the monthly fee is  
15 only \$1.
- 16 *Teacher:* Okay, be careful how you say. . . tell me what the rate is again.
- 17 *Student:* 12 cents.
- 18 *Teacher:* Okay, good. You said point twelve cents. You want to be careful. If you throw  
19 cents on there the point . . . do you understand what I'm saying?
- 20 *Student:* Goes down.
- 21 *Teacher:* Yeah, good. Okay, um, how does that fit what you had to do for company C?

22 *Student:* Because, since it's 5 and 2 you have to get something that's lower than 2 and 1 is  
23 practically the only thing that you can use. And so, I would use that and I just  
24 started at 20 cents then I went down to 15 and then used 12.

25 *Teacher:* So, what happened when you used 20 cents?

26 *Student:* It was actually \$11 for 50 and then I had to go back down to 15 and then I got,  
27 um, 8.5 cents, or dollars and then I went down to 12 cents and I got 7, so . . .

28 *Teacher:* And how did you get to the 7? 'Cause I don't see . . . what work did you do to get  
29 to the 7?

30 *Student:* I just put it on the calculator.

31 *Teacher:* Okay, so what did you put on the calculator? Where did you look?

32 *Student:* Um, I just put it in, I put, um, y equals, and I just erased my 1<sup>st</sup> one, but as soon  
33 as I did that I just went to the table and I went down to 50. The first two were 7  
34 and then I went over to find out that much.

35 *Teacher:* Okay, I want you to show me how that would look on the graph. And you . . .

36 *Student:* This one?

37 *Teacher:* Uh huh. And you mentioned that a dollar is practically the only thing you can  
38 have that's less than 5 or 2. I'm going to ask you to see if there is another plan  
39 that you could have.

40 *Student:* And it can be anything above 0?

41 *Teacher:* You decide. You go with that.

42

43 **EXPLORE PHASE (Small Group)**

44 *Teacher:* Okay, if you have tried something but it didn't work, share that, too. I want you  
45 to talk with each other right now. I know you were . . . you're into your thoughts,  
46 but I want you to start sharing. Okay?

47 *Student:* She multiplied it and she got \$7.50 again, the same amount as companies A and  
48 B, but just at a lower rate.

49 *[Crosstalk]*

50 *Teacher:* Jim, what's the 12...0.12 that she's talking about? What does that stand for?

- 51 *Student:* 12 cents.
- 52 *Teacher:* Pardon me?
- 53 *Student:* 12 cents.
- 54 *Teacher:* 12 cents. And what does it stand for in terms of her calling plan?
- 55 *Student:* The rate.
- 56 *Teacher:* Okay. So, if it's the rate then it's telling you that...what's 12 cents? What do you  
57 mean by the rate? What costs 12 cents?
- 58 *Student:* Per minute.
- 59 *Teacher:* Per minute, good. What was the dollar amount?
- 60 *Student:* The monthly fee.
- 61 *Teacher:* Okay. Um, did you come up with something different, or are you with them  
62 here?
- 63 *Student:* Yeah. There's a . . .
- 64 *Teacher:* Let's do this question first. Are you with them here?
- 65 *Student:* Yes.
- 66 *Teacher:* Okay, now, you said - I'll be right there - you said there's a pattern. What were  
67 you going to share there?
- 68 *Student:* For each dollar lower the . . .
- 69 *Teacher:* Okay, just stop there.
- 70 *Student:* Got it.
- 71 *Teacher:* Okay? Because I want you to share. I think I know what you're going to say, so I  
72 want you to share that with them. I'm going to come back, okay?
- 73 *Student:* Um, well, \$1.50, the monthly fee would be \$1.50 and it would be 11 cents per  
74 minute that you talk on the phone. And if you add \$1.50 + 11 cents times 50, you  
75 figure out what it would be at 50, equal to the other equations.
- 76 *Student:* Stop there.
- 77 *Teacher:* How did you guys come to that equation?

- 78    *Student:*        Because she found the one with a dollar plus 12 cents every minute, so we went  
79                            up 50 cents and brought that. And since we went up 50 cents, we brought that  
80                            minute down to 11 cents and then times 50 and you can tell.
- 81    *Teacher:*        Why? I want you to think harder about where 50 cents comes in. Maybe if I  
82                            asked you to think about how these 3 equations are connected and I'd like you  
83                            to think, there's another one, too. There's another one. How are these 3  
84                            equations connected? I want you to try and figure that out.
- 85    *[End of Audio]*