Note: Not all slides have talking points provided.

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| **Slide** | **Talking Points** |
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| 5 | Throughout this protocol, we’ll refer back to Math Practice #3: Constructing Viable Arguments and Critiquing the Reasoning of Others. Here, we’re mostly focused on the “constructing viable arguments” element of that math practice. So the emphasis in discussion will be about how to explain the reasoning used someone (either you or someone else’s) in a logical and understandable way. |
| 6 | This pre-assessment problem connects to a 6th grade math content standard. However, we’ll be focusing also on math practice #3 – so pay attention to how pushing on math practice #3 help provide insight into the nature and quality of the person’s understanding of the content standard. The content standards and the math practice standards work together to provide a richer picture of a learner’s understanding, and – used together - raise the level of rigor of any problem. |
| 7 | In this method, the person drew a group of 2 fruit center candies and a group of 3 caramel centers candies, and just kept adding pairs of groups in each row until they reached a total of 30 total candies. Then they totaled the caramel candies in all the green ovals.Did anyone in our team solve it like this? Does this explanation match how you were thinking about the problem? If not, tell us how you were thinking about the problem. |
| 8 | In this method, the person used a table to keep track of the fruit and caramel center candies. The first row shows that when you have 2 fruit centers for 3 caramel centers, you have a total of 5 candies. Then they doubled the fruit and caramel candies to get the next row; total was now 10 candies. Then they doubled again to get a total of 20. Then they added the amounts in the 10-candy row (4 + 8 = 12) to the amounts in the 20-candy row (6 + 12 = 18), and got a total of 30 candies with 18 caramel centers.Did anyone in our team solve it like this? Does this explanation match how you were thinking about the problem? If not, tell us how you were thinking about the problem. |
| 9 | In this method, the person drew two number lines and lined up 2 fruit centers for every 3 caramel centers. Then they skip-counted until they got a pair of numbers that totaled 30. This representation is called a double number line. Double number lines can be used to represent ratios (as well as proportions). For more information about double number lines, look at Bill McCallum's progressions website: http://commoncoretools.files.wordpress.com/2012/02/ccss\_progression\_rp\_67\_2011\_11\_12\_corrected.pdf.Did anyone in our team solve it like this? Does this explanation match how you were thinking about the problem? If not, tell us how you were thinking about the problem. |
| 10 | If you have another way that you thought about the problem that has not been shown yet, would you explain it or draw it for us?As you explain it, tell us what you did and also tell us WHY you did each step. |
| 11 | There are various challenges Kym might face in completing this problem. However, since our mathematical focus today is on constructing viable arguments and critiquing the reasoning of others, try to focus your discussion on Kym’s challenges to showing and explaining her work. |
| 12 |  |
| 13 | We’ll be using a template to capture three important things about Kym’s work:1) What did she do well?2) What did she struggle with?3) How would you change the problem to avoid unintended barriers for this student? |
| 14 | As you discuss Kym’s work, please be sure to allow time to talk about what Kym did ***well***, not only what she struggled with. Articulating her strengths will be an important part of identifying the appropriate strategies for her.  |
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| 16 | When you propose a change to the pre-assessment to avoid unintended barriers, be sure to explain why you would make that change, not just what the change is. |
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| 18 | Today’s protocol brought together the work from Protocol 2 (considering the student)) and Protocol 3 (considering the mathematical demands of various math work) to consider ways to make meaningful modifications for students that maintain the rigor of the mathematics.The final protocol will focus on using this accessibility framework we’ve learned with not just one student, but a classroom of students with diverse learning needs. |