

Michelle Reyes V.

ED609-81

Error Analysis #5

1. What has the student done well and/or what makes sense about the student's thinking, even if it is incorrect or incomplete?

The student has done a good job at illustrating/shading in the numerator part of the fraction. This means that they are aware that in a fraction such as $\frac{2}{3}$, the numerator represents the "shaded portion" in their model. The student also does a good job of drawing the "1 whole" bar and the " $\frac{2}{3}$ " bar with equal proportions; meaning that they understand that the bar cannot be bigger or smaller in size because they are splitting the same bar.

2. What error has the student made? What are the big mathematical concepts underlying this error?

The student has misrepresented the denominator in the fraction $\frac{2}{3}$. Instead of splitting the 1 whole in 3 equal parts and shading in 2 out of 3, they shaded in 2 (numerator) and left 3 (denominator) unshaded. The big mathematical concept underlying this error is that the student does not know how to represent the denominator in a model.

3. What is one assessing question you could use to learn more about the student's thinking?

One assessing question that I would use to learn more about the students' thinking is "how do you know that this is the correct answer?" This question will allow the student to explain in their own words why they came to their conclusion/answer.

4. What manipulatives, representations or other interventions could you use to draw the student's attention to the underlying concept?

In order to draw the students attention to the underlying concept, I could possibly use a whiteboard and two different colored markers. One marker would represent the numerator and the second marker would represent the denominator. The student and I would practice similar problems with different denominators for him/her to see that the denominator is what represents the number of pieces in the whole. We would draw these problems on the white boards.

5. What is one advancing question you could use to help the student move forward without giving away the answer?

One advancing question I could use to help the student move forward without giving away the answer would be, “what if I changed the denominator to 4?” By asking this question the student may have more time to think about how that would change the number of pieces in the model. They may see that they should have split it into 3 and not into 5 total pieces.