

Item 3

Claim 4
4.NF.B.4c

SAMPLE	SCORE	RATIONALE
A	1	This response indicates a clear understanding of how much clay is needed to make 6 mugs. However, the response does not provide evidence of considering the fact that the clay only comes in 1-pound blocks. The student explained how he/she determined the total amount of clay needed ("1 mug is $\frac{3}{4}$," and then "add all of them"), but did not give the correct number of blocks of clay that Zela needs. The response receives partial credit of 1 point.
B	0	The student incorrectly determined that 6 pounds of clay would be needed to make 6 mugs. The student provided three calculations that are correct, but do not fit the situation, and then incorrectly interpreted what the calculations mean. The student concluded by stating that he/she doubled 75 three times, which would yield a numeric value of 450 (4.50 in decimal form), not 600 (6.00 in decimal form), as is stated in the response. The response receives 0 points.
C	1	The student used repeated addition to successfully determine that $\frac{18}{4}$ is the sum of $\frac{3}{4}$ added 6 times. The next set of calculations indicate a use of repeated subtraction of $\frac{4}{4}$. However, the response does not earn full credit because the concluding statement, though correct, does not connect the calculations with a justification of why Zela would need to purchase 5 pounds of clay.
D	2	The student applied multiplication of fractions to determine that $\frac{18}{4}$ pounds of clay would be needed to make 6 mugs. The student then used repeated subtraction to determine how many 4s are in 18, successively subtracting $\frac{4}{4}$ from $\frac{18}{4}$. Finally, the student accurately concluded that Zela would need an extra $\frac{2}{4}$ pounds of clay, beyond 4 pounds of clay, in order to make all of the mugs, which means that Zela would need 5 pounds of clay.
E	1	The student's response indicates an understanding that 6 mugs would require $\frac{18}{4}$ pounds of clay, and that this fractional amount is between 4 and 5 whole pounds of clay. However, the student's justification is only partially complete in detailing how the determination of 5 pounds was made. The response receives partial credit of 1 point.
F	0	The student's response suggests a limited understanding of the problem. The response earns 0 points.
G	2	Using repeated addition of fractions, the student calculated that 6 mugs would require $\frac{18}{4}$ pounds of clay. The student then used repeated subtraction (although notated as division) to determine how many whole pounds of clay are contained within the $\frac{18}{4}$ pounds. The student's calculations indicate that 4 and $\frac{2}{4}$ pounds would be needed. The final statement of the response indicates that the student accurately interpreted the need to purchase an additional pound of clay in order to have enough clay to make 6 mugs.

Item 3 *(continued)***Claim 4**
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SAMPLE	SCORE	RATIONALE
H	1	The student began by reasoning that 1 clay block would make 1.25 mugs. Although this value is incorrect (1 clay block is enough to make 1 and $\frac{1}{3}$ mugs), the reasoning is promising. The student then added 1.25 five times (perhaps representing the number of mugs that could be made from 5 blocks of clay), and correctly indicated that the sum is 6.25. The student stated that “by knowing that there will be $\frac{1}{4}$ left from each clay block,” he/she was able to figure out that Zela needs 5 pounds of clay. However, the connection between these ideas is fuzzy, and the calculations do not clearly support the statement. The response lacks a logical justification and earns partial credit.
I	2	The student used an adding-on strategy to determine that 4 $\frac{1}{2}$ pounds of clay would be needed to make 6 mugs. The student then added an extra $\frac{1}{2}$ pound to reach 5 whole pounds of clay as the least number of blocks of clay that Zela could get in order to make 6 mugs.