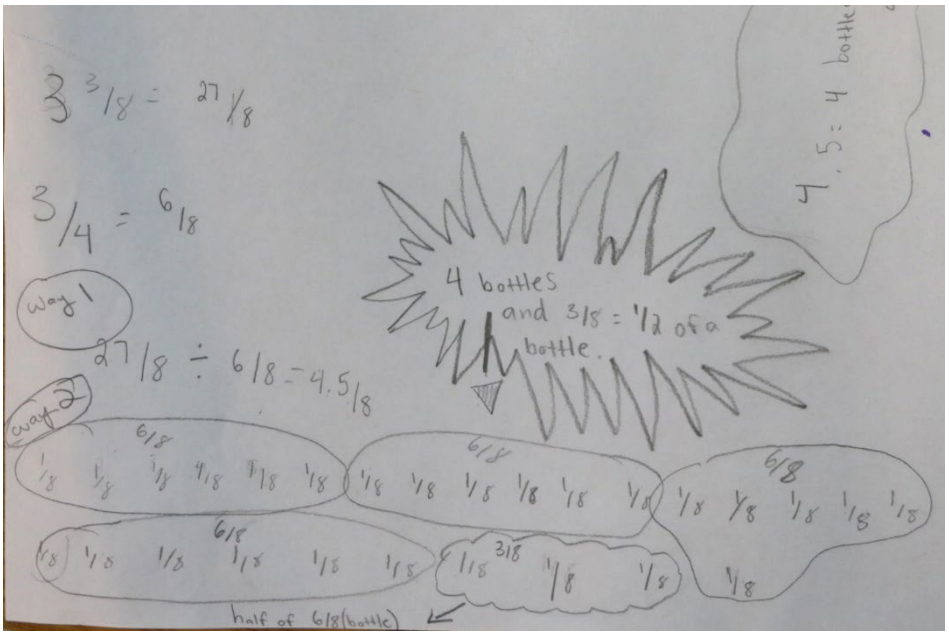
BOTTLING MAPLE SYRUP

OPERATION P

Divide a fraction by an unlike-denominator fraction with a non-whole number remainder

Sample 1

The student correctly reasons that they are dividing the total volume of syrup by the volume of each bottle. They correctly establish common denominators and divide the numerators. However, they make an error with the division of the denominators, resulting in an incorrect answer of $\frac{4.5}{8}$. In their second solution, they use unit fractions to show the total quantity of 27 one-eighths and then circle how much is in each bottle ($\frac{6}{8}$). When considering the remainder, since a full bottle holds $\frac{6}{8}$L, the student clearly represents the remainder of $\frac{3}{8}$L as $\frac{1}{2}$ of a bottle.



Sample 2

The student simultaneously represents the quantity of syrup and the capacity of each bottle. They use eighths to represent the quantity of syrup and show the bottle that is $\frac{6}{8}$L beside the full litre representation. The student distributes the $\frac{27}{8}$L maple syrup into each bottle. Notice that the student circles two eighths in the second bottle to show that these are the remaining $\frac{2}{8}$L from the first litre. Placing the bottles beside the litres allows them to easily see that the last bottle is half full.