# BANANA BREAD BAKE OFF
OPERATION G Use models to compose fractions using unit fractions as a form of multiplication

Sample 1

This student demonstrates an understanding of multiplication of a fraction by a fraction, along with a clear representation showing partitioning (into halves) and sub partitioning (each half further into thirds). The student shows accurately that $\frac{1}{3}$ of $\frac{1}{2}$ is $\frac{1}{6}$. Interestingly, the student language in the explanation also reveals some understanding of the operation of multiplication with fractions: "I did 1 hop because that's $\frac{1}{3}$ of the $\frac{1}{2}$". One third **of** one half is exactly what $\frac{1}{3} \times \frac{1}{2}$ means.
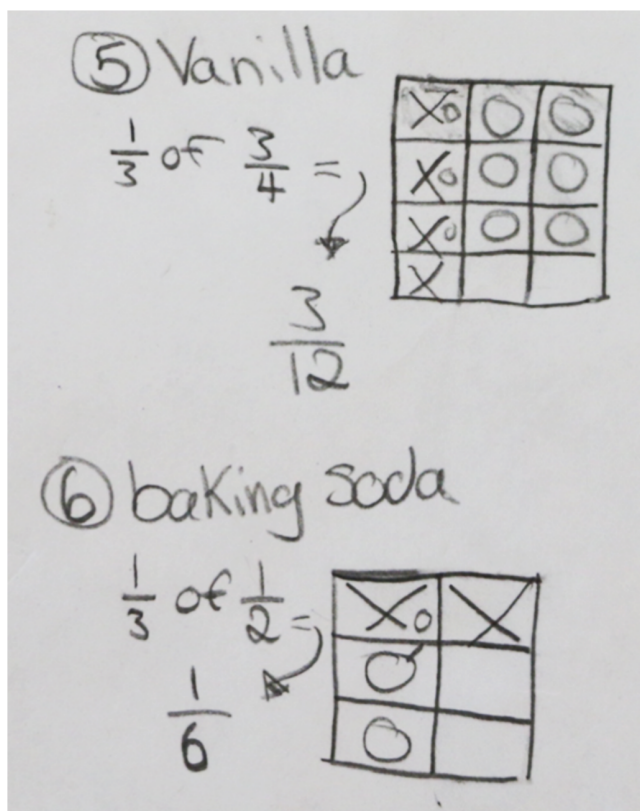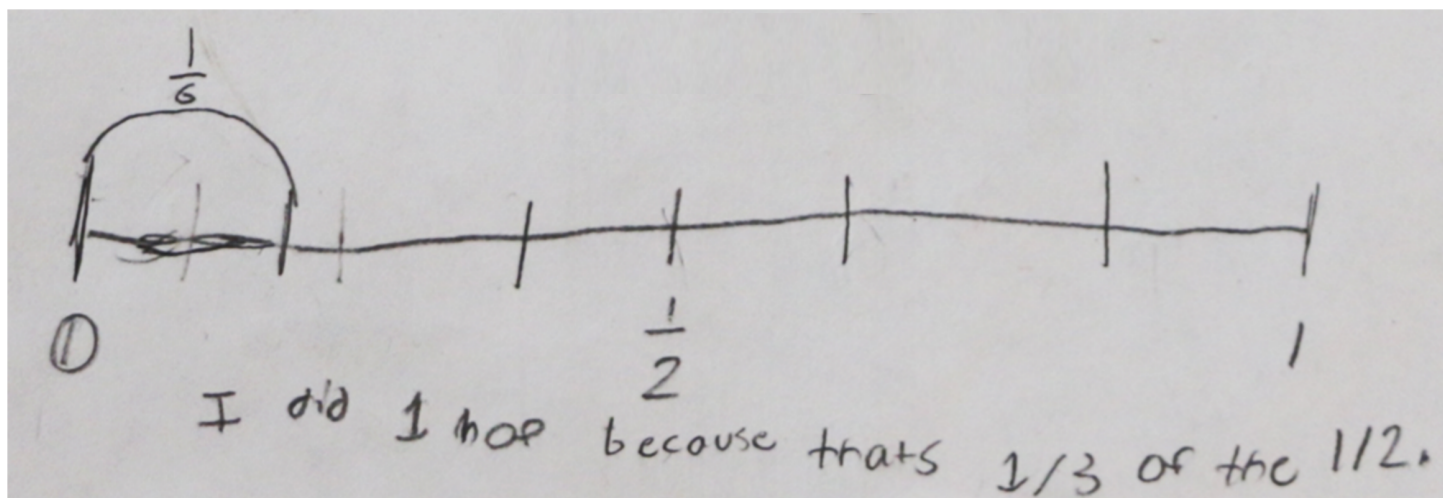
Sample 2

This student represents the multiplication of fractions using arrays, recognizing that the result is the intersecting space shared by the two fractions represented. In the first representation ("vanilla"), the student partitions the rectangle into fourths, filling in 3 rows with circles (to represent three fourths). The student then sub partitions the area into thirds, filling one column with X's (to represent one third). This strategy naturally creates a common denominator of twelfths, with $\frac{3}{12}$ represented in the intersecting space. Notice that the student does not reduce $\frac{3}{12}$ to $\frac{1}{4}$, but that the language represents the operation meaningfully (" $\frac{1}{3}$ of $\frac{3}{4}$ ").