

SPRINKLES ON A CAKE & RUNNING RELAY

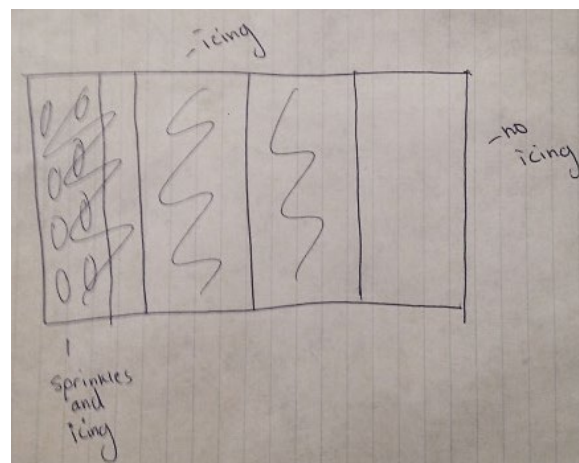
OPERATION N

Multiply fractions using models and symbols

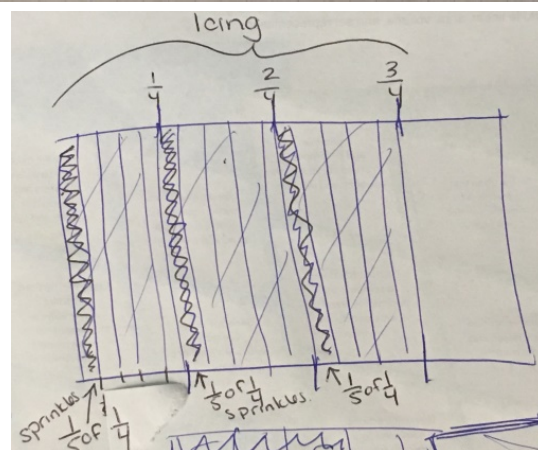
Sample 1

Students may solve using a long rectangular model as in Sample 1A. Although this is mathematically correct (if the proportions are precise) it is difficult for students to accurately name the fraction. A key question that could be used to move their thinking would be: "Is there another way that you could partition the iced region?". If students still want to use vertical partitions for both (instead of vertical and horizontal partitions to create an array) you could ask them to think about unit fractions in terms of the sprinkles and the icing, as the student has done in Sample 1B. The student has coloured $\frac{1}{5}$ sprinkles of each of the $\frac{3}{4}$ ($\frac{1}{4}, \frac{1}{4}, \frac{1}{4}$) parts of the icing and can see visually that this represents $\frac{3}{20}$ of the total cake.

A



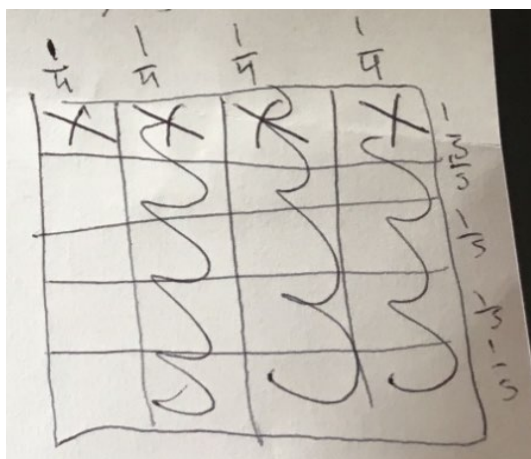
B



Sample 2

When students partition the cake vertically and horizontally, creating an array, the intersecting space (overlap) is more easily named. Notice that students may consider it as the intersecting space of $\frac{3}{4}$ and $\frac{1}{5}$ of the whole cake (A) or as the intersecting space of $\frac{1}{5}$ of the $\frac{3}{4}$ (B). Both interpretations will result in a correct answer.

A



B

