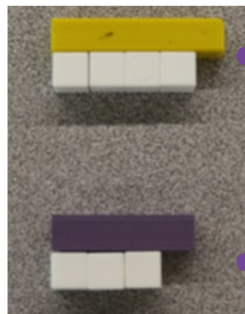


# CHRIS' ICE CREAM CARTON

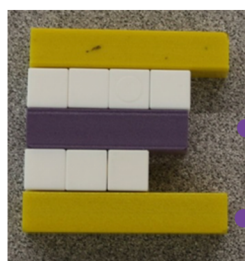
**OPERATION L** Divide a fraction by a like denominator unit fraction using models and symbols (e.g.,  $\frac{3}{8}$  divided by  $\frac{1}{8}$ )

## Sample 1



This student uses relational rods to show  $\frac{4}{5}$  kg.

The student uses relational rods to show  $\frac{3}{4}$  of the whole carton.

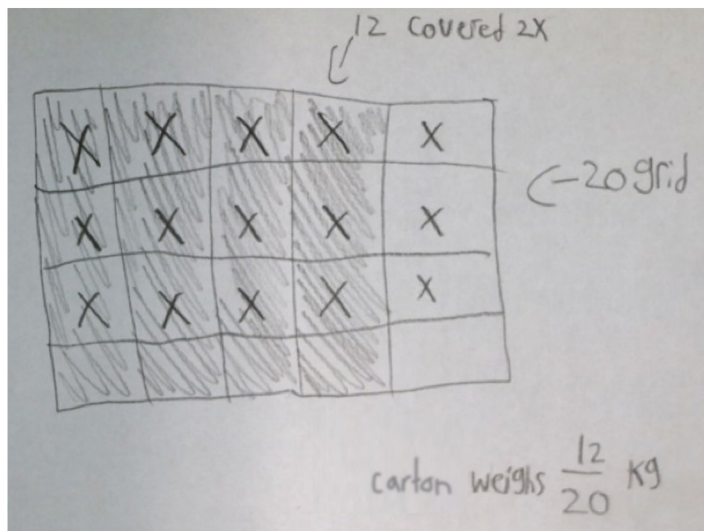


The student then brings the rods together to show the relationship between the two fractions. They stack the  $\frac{4}{5}$  fraction above the  $\frac{3}{4}$  fraction. This allows them to identify  $\frac{3}{4}$  of  $\frac{4}{5}$ .

They then place the 5ths rod under the  $\frac{3}{4}$  fraction to visually represent that  $\frac{3}{4}$  of  $\frac{4}{5}$  is  $\frac{3}{5}$ .

## Sample 2

This sample demonstrates the use of an array. The student shaded  $\frac{4}{5}$  of the grid, then made x's to represent  $\frac{3}{4}$  of the grid. The overlapping area shows the result of multiplying  $\frac{4}{5}$  by  $\frac{3}{4}$ . Labels would promote further factoring of  $\frac{12}{20}$  to  $\frac{3}{5}$ , which could lead them to recognize the relationship between the numerators and denominators.



## Sample 3

The student recognizes that the question is asking for " $\frac{3}{4}$  of  $\frac{4}{5}$ ", demonstrating understanding of the operation of multiplication. The student initially partitions a number line into fifths and includes accurate labels. The student then further partitions each fifth into fourths and then uses hops to identify  $\frac{3}{4}$  of each  $\frac{1}{5}$ , up to  $\frac{4}{5}$ . It is unclear how the models connect to the multiplication statement.

