G5-M4-Lesson 13

1. Solve. Draw a rectangular fraction model to show your thinking.

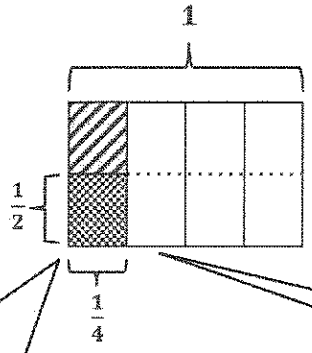
   a. Half of $\frac{1}{4}$ pan of brownies

   Half of $\frac{1}{4} = \frac{1}{8}$

   $\frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$

   Seeing the word *of* reminds me of third grade when I learned that 2×3 meant 2 groups *of* 3.

   The problem tells me I have $\frac{1}{4}$ pan of brownies. I can draw a whole pan. Then, I can shade and label $\frac{1}{4}$ of the pan.

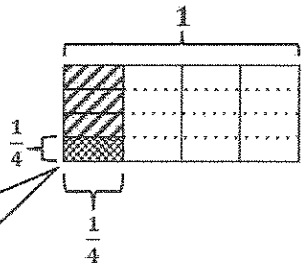


   Since I want to model 1 half of the fourth of a pan, I can partition the fourth into 2 equal parts, or halves. I can shade $\frac{1}{2}$ of the $\frac{1}{4}$.

   My model shows me that $\frac{1}{2}$ of $\frac{1}{4}$ is equal to $\frac{1}{8}$ of the pan of brownies.

   b. $\frac{1}{4} \times \frac{1}{4}$

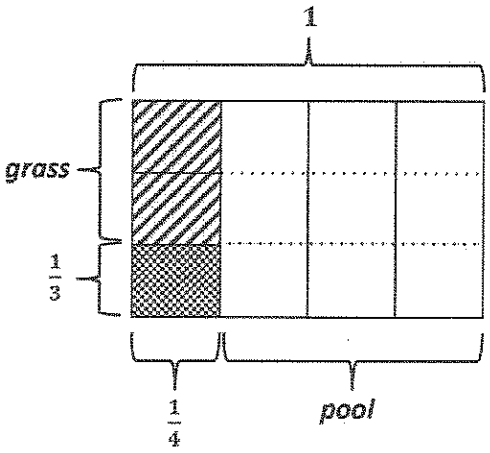
   $\frac{1}{4} \times \frac{1}{4} = \frac{1}{16}$



   The part that is double-shaded shows $\frac{1}{4}$ of $\frac{1}{4}$.

   $\frac{1}{4}$ of $\frac{1}{4} = \frac{1}{16}$

2. The Guerra family uses $\frac{3}{4}$ of their backyard for a pool. $\frac{1}{3}$ of the remaining yard is used for a vegetable garden. The rest of the yard is grass. What fraction of the entire backyard is for the vegetable garden? Draw a picture to support your answer.



Since $\frac{3}{4}$ of the backyard is a pool, that means $\frac{1}{4}$ of the backyard is *not* a pool.

$$\frac{1}{3} \times \frac{1}{4} = \frac{1}{12}$$

$\frac{1}{12}$ of the backyard is a vegetable garden.