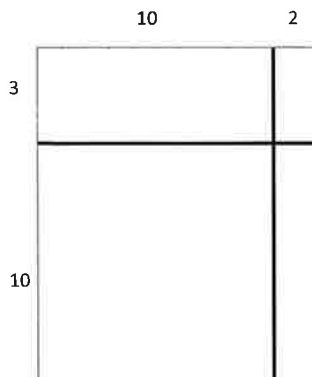
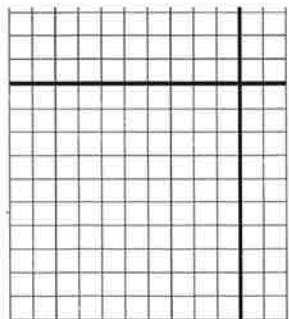


Name _____

Date _____

1. a. In each of the two models pictured below, write the expressions that determine the area of each of the four smaller rectangles.

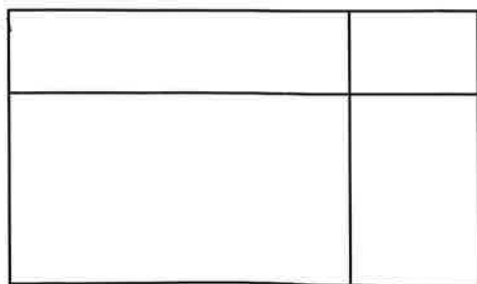


- b. Using the distributive property, rewrite the area of the large rectangle as the sum of the areas of the four smaller rectangles. Express first in number form and then read in unit form.

$$13 \times 12 = (3 \times \underline{\quad}) + (3 \times \underline{\quad}) + (10 \times \underline{\quad}) + (10 \times \underline{\quad})$$

Use an area model to represent the following expressions. Record the partial products and solve.

2. 17×34



$$\begin{array}{r}
 34 \\
 \times 17 \\
 \hline
 \\
 \hline
 \\
 \hline
 \\
 \hline
 \\
 \hline
 \end{array}$$

Draw an area model to represent the following expressions. Record the partial products vertically and solve.

3. 45×18

4. 45×19

Visualize the area model and solve the following numerically using four partial products. (You may sketch an area model if it helps.)

5. 12×47

6. 23×93

7. 23×11

8. 23×22