

NAME _____

DATE _____

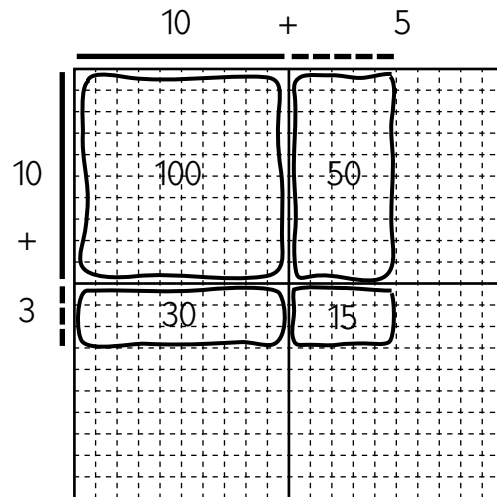
Home Connection 13 ★ Worksheet



NOTE TO FAMILIES

One way to think of a multiplication problem like 13×15 is to picture it in the form of a rectangle. We have been doing this a lot in class recently. When you do this, the two numbers you're multiplying are the dimensions of the rectangle, and the area of the rectangle is the answer. The advantage of looking at it this way is that you can actually see the pieces or "partial products" that make up the total. This Home Connection provides more practice using this area model to solve double-digit multiplication problems.

Example:



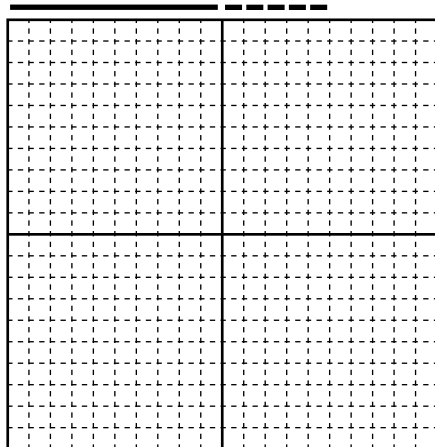
$$100 + 50 + 30 + 15 = 195$$

$$13 \times 15 = 195$$

Multiplication Sketches

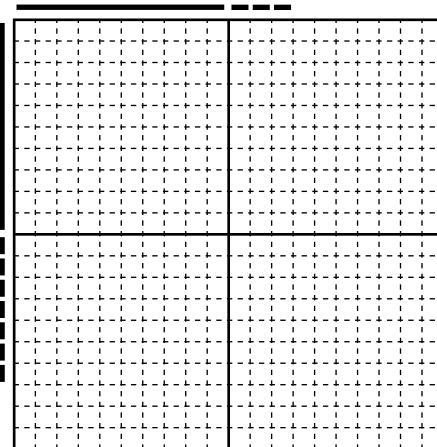
1 Fill in and label these sketches to solve the multiplication problems. Below each sketch, write an equation to show how you found the total area and fill in the answer to the multiplication problem.

a



$$15 \times 15 = \underline{\hspace{2cm}}$$

b



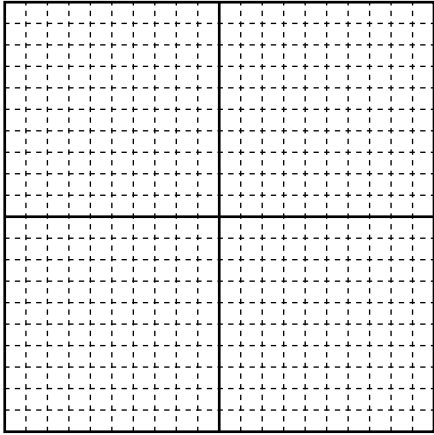
$$17 \times 13 = \underline{\hspace{2cm}}$$

(Continued on back.)

Home Connection 13 Worksheet (cont.)

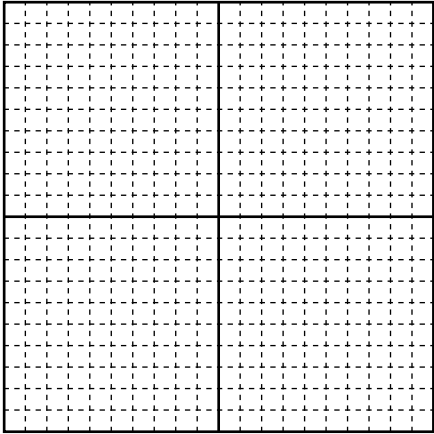
2 Make a labeled sketch to solve each multiplication problem below. For each one, write an equation to show how you got the total and fill in the answer to the multiplication problem.

a



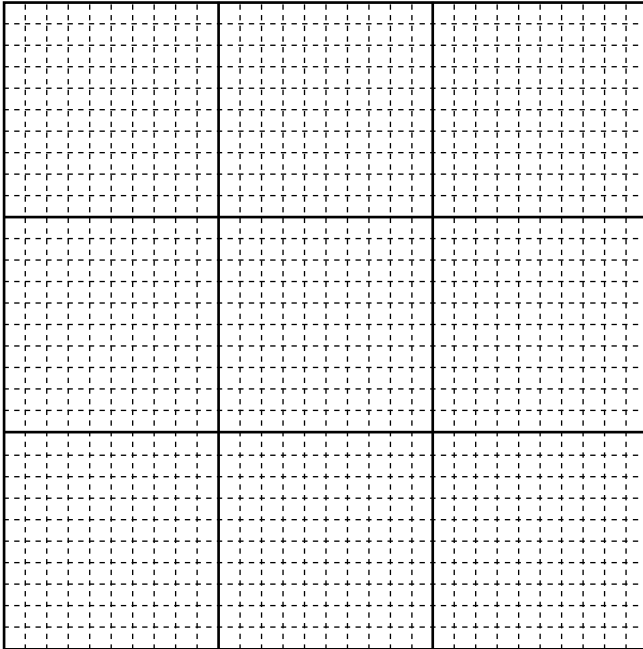
$14 \times 16 = \underline{\hspace{2cm}}$

b



$13 \times 18 = \underline{\hspace{2cm}}$

c

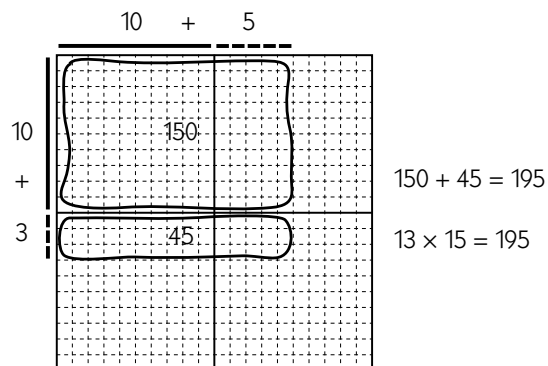
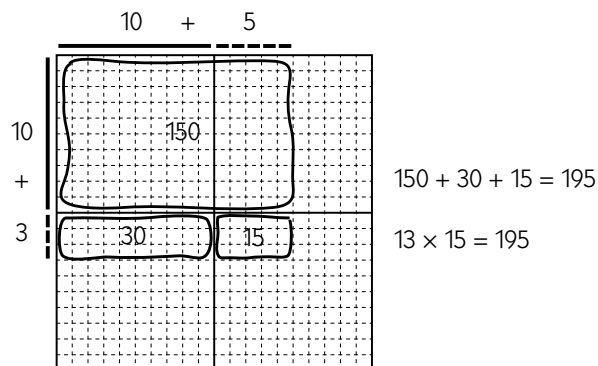


$24 \times 27 = \underline{\hspace{2cm}}$

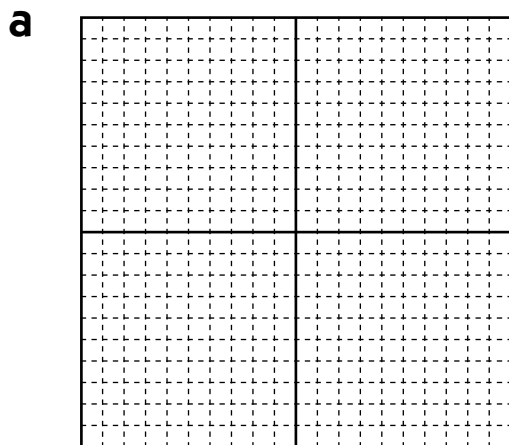
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Home Connection 13 Worksheet (cont.)

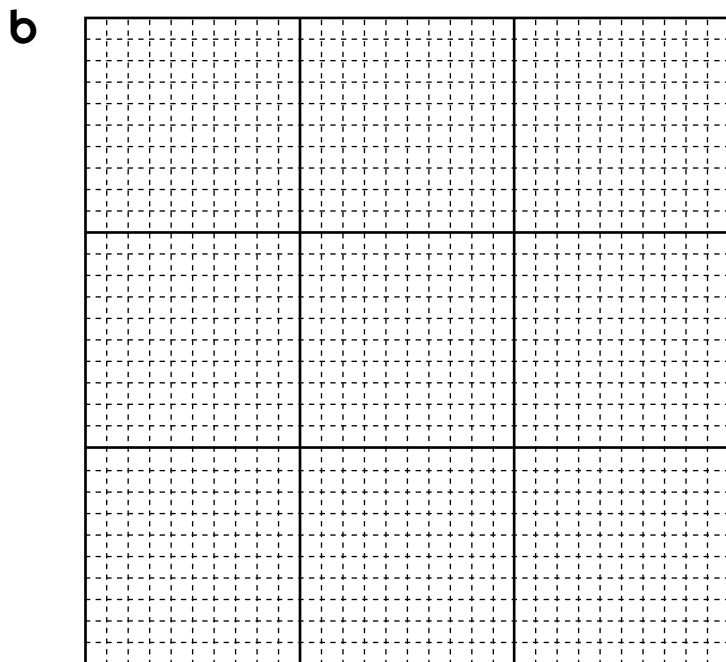
3 Sometimes you can break a rectangle into two or three partial products, instead of four, to solve a multiplication problem. Here are two examples.



Solve the problems below by sketching an array and breaking it into fewer than four partial products. You can use four partial products, though, if you need to. For each one, write an equation to show how you got the total and fill in the answer to the multiplication problem.



$12 \times 17 = \underline{\hspace{2cm}}$



$14 \times 22 = \underline{\hspace{2cm}}$

(Continued on back.)

Home Connection 13 Worksheet (cont.)

4 Multiply each number in the top row by the number at the left. The first one is done for you as an example.

×	2	4	8	3	6	12	5	10	7	9
10	20									

×	2	4	8	3	6	12	5	10	7	9
3										

×	2	4	8	3	6	12	5	10	7	9
13										

5 Mara says you can use the answers in the first 2 rows of Problem 4 to help figure out the answers in the third row. Do you agree with her? Why or why not?



CHALLENGE

6 Manny has 24 feet of fencing and wants to make the biggest possible rectangular pen for his rabbit to live in outside. What length should he make each side of the pen? Use numbers, words, and/or labeled sketches to solve this problem and show your work.

