

Area Models and Partial Products

You can use area models to multiply 2-digit numbers by 2-digit numbers.

Use the model and partial products to solve.

Draw a rectangle to find 19×18 .

The rectangle is 19 units long and 18 units wide.

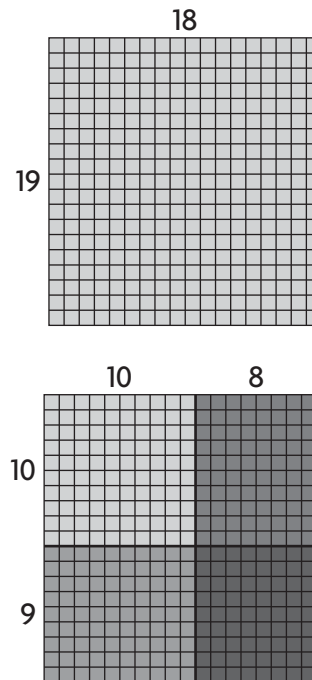
Step 1 Break apart the factors into tens and ones. Divide the area model into four smaller rectangles to show the factors.

Step 2 Find the products for each of the smaller rectangles.

$$10 \times 10 = 100 \quad 10 \times 8 = 80 \quad 9 \times 10 = 90 \quad 9 \times 8 = 72$$

Step 3 Find the sum of the products. $100 + 80 + 90 + 72 = 342$

So, $19 \times 18 = 342$.



Draw a model to represent the product. Then record the product.

1 21×25

2 16×14

3 24×15