

## 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  $19 \times 18$ .

The rectangle is 19 units long and 18 units wide.

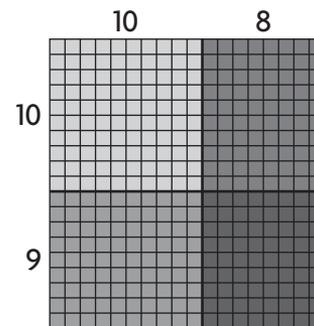
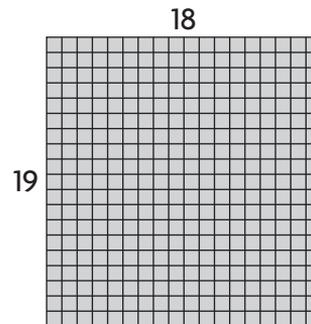
**Step 1** Break apart the factors into tens and ones. Divide the area model into four smaller rectangles to show the factors.

**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**  $21 \times 25$

**2**  $16 \times 14$

**3**  $24 \times 15$