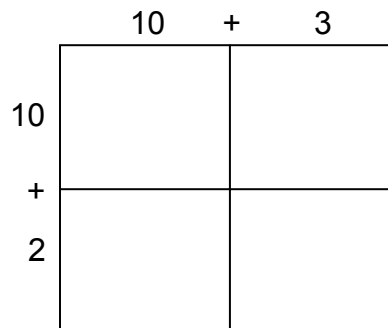


1.1 Whole Numbers: Using an Area Model to Explain Multiplication

## AREA PROBLEMS

1. Multiply using a traditional algorithm and an area model.

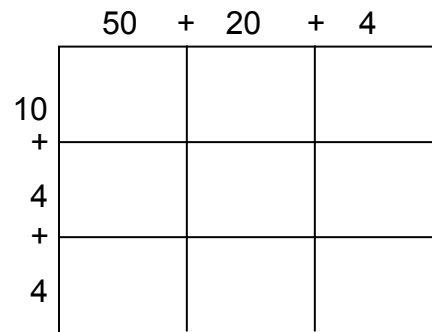
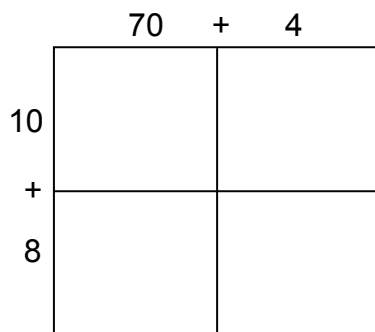
$$\begin{array}{r} 12 \\ \times 13 \\ \hline \end{array}$$



Draw arrows to show how the partial products of a traditional algorithm and rectangles inside the rectangle of an area model are related.

2. Compute  $18 \times 74$  using a traditional algorithm. Multiply using an area model in two different ways.

$$\begin{array}{r} 18 \\ \times 74 \\ \hline \end{array}$$



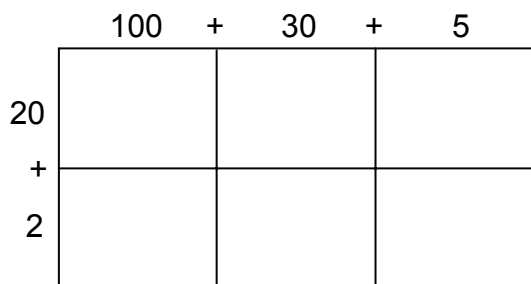
Draw arrows to show how the partial products of the traditional algorithm and rectangles inside the rectangle of the area models are related.

*Rectangles are not drawn to scale.*

1.1 Whole Numbers: Using an Area Model to Explain Multiplication

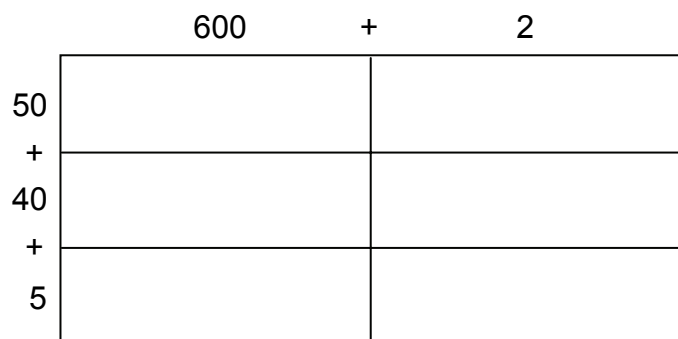
## AREA PROBLEMS (continued)

3. Use an area model to compute  $135 \times 22$ . Check your answer using a traditional algorithm.



Check:

4. Use an area model to compute  $602 \times 95$ . Check your answer using a traditional algorithm.



Check:

5. Make up a challenging multiplication problem. Use an area model to multiply the numbers. Then check your answer using a traditional algorithm.

*Rectangles are not drawn to scale.*