



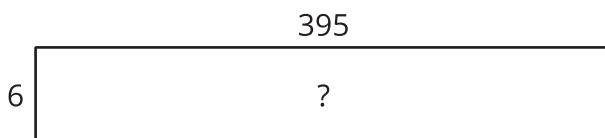
# Multiply Three- and Four-Digit Numbers by One-Digit Numbers

Let's multiply three- and four-digit numbers by one-digit numbers.

## Warm-up

### Estimation Exploration: Mysterious Area

What is the area of the rectangle represented by the diagram?



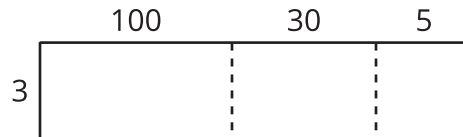
Record an estimate that is:

too low	about right	too high

## Activity 1

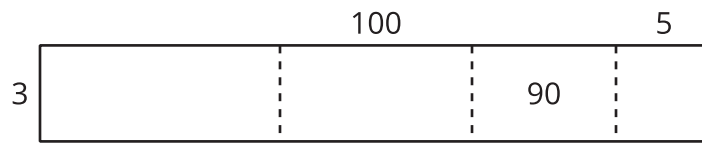
### Larger Numbers to Multiply

1. Clare draws this diagram.



- a. What multiplication expression can be represented by the diagram?
- b. Find the value of the expression. Show your thinking using diagrams, symbols, or other representations.
2. Consider the expression  $6 \times 252$ .
- a. Draw a diagram to represent the expression.
- b. Find the value of the expression. Show your thinking using diagrams, symbols, or other representations.

3. Lin draws a diagram to represent  $3 \times 2,135$ .



- Complete Lin's diagram.
  - Write an expression to represent the value of each part of the diagram.
- c. Find the value of  $3 \times 2,135$ . Show your thinking using diagrams, symbols, or other representations.

## Activity 2

### Jada's Errors

1. Jada uses this diagram to multiply  $3 \times 6,489$ . She makes a few errors in the diagram.

	6,000	400	80	9
3	18	12	24	27

- a. Explain the errors Jada made.

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- b. Find the value of  $3 \times 6,489$ . Show your thinking using diagrams, symbols, or other representations.

2. Find the value of  $5 \times 699$ . Show your thinking using diagrams, symbols, or other representations.

3. Find the value of  $8 \times 4,973$ . Show your thinking using diagrams, symbols, or other representations.

