

# Challenge

## Lattice Multiplication Practice

Use a lattice multiplication grid to multiply  $4 \times 85$ .

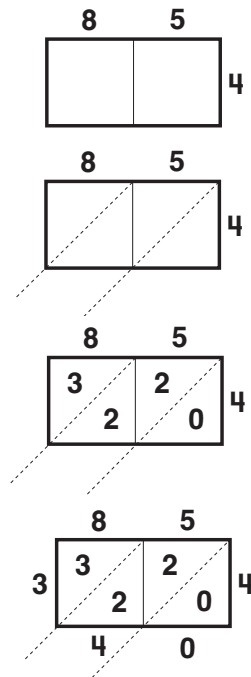
First, make your lattice. The factor 4 has one digit. The factor 85 has two digits. So, make your lattice one-by-two. Label the sides with the factors, as shown.

Next, draw a diagonal in each square.

Now you are ready to start multiplying. Begin at the right:  $4 \times 5 = 20$ . Write 20 in the right-hand square. Write 2 above the diagonal. Write 0 below the diagonal. Then multiply  $4 \times 8 = 32$ . Write 32 in the next square.

The next step is to add the numbers in the diagonals and write the sums around the lattice.

Finally, read the product. Start at the left and read down and across the bottom: 340. So,  $4 \times 85 = 340$ .



**Use lattice multiplication to find each product. Use a separate sheet of paper if necessary.**

1.  $5 \times 35 =$  \_\_\_\_\_      2.  $9 \times 64 =$  \_\_\_\_\_      3.  $7 \times 53 =$  \_\_\_\_\_

4.  $2 \times 99 =$  \_\_\_\_\_      5.  $6 \times 47 =$  \_\_\_\_\_      6.  $3 \times 75 =$  \_\_\_\_\_

**7. Explain** You filled in the squares of your lattices with two-digit numbers. What should you do if you have a one-digit number to write in a square of a lattice? Try  $2 \times 36$ .

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## Lattice Multiplication Practice

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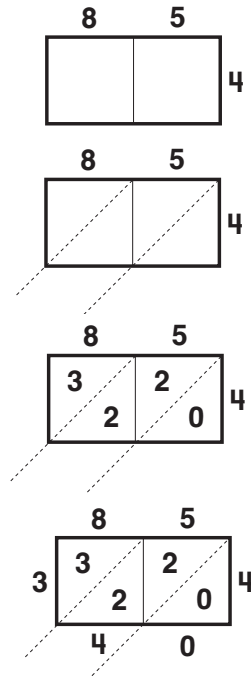
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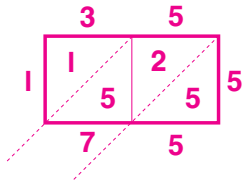
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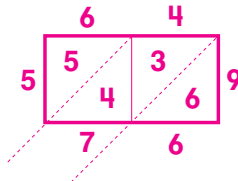


Use lattice multiplication to find each product. Use a separate sheet of paper if necessary.

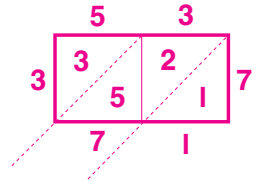
1.  $5 \times 35 = \underline{\quad 175 \quad}$



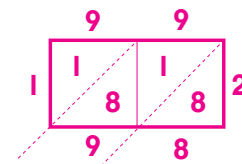
2.  $9 \times 64 = \underline{\quad 576 \quad}$



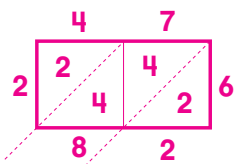
3.  $7 \times 53 = \underline{\quad 371 \quad}$



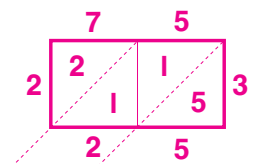
4.  $2 \times 99 = \underline{\quad 198 \quad}$



5.  $6 \times 47 = \underline{\quad 282 \quad}$



6.  $3 \times 75 = \underline{\quad 225 \quad}$



7. **Explain** You filled in the squares of your lattices with two-digit numbers. What should you do if you have a one-digit number to write in a square of a lattice? Try  $2 \times 36$ .

**You should place a one-digit number below the diagonal in a square. The answer is 72. Check students' drawings.**