

LATTICE MULTIPLICATION



Do you remember learning double-digit multiplication?
How were you taught this?
Do you think it takes a long time?

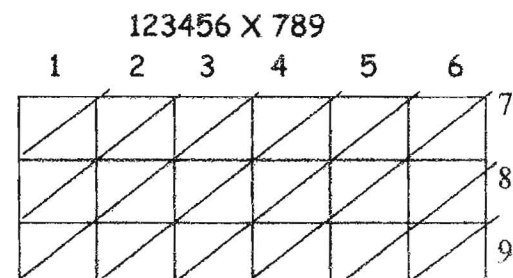
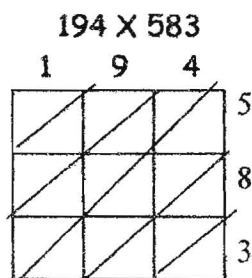
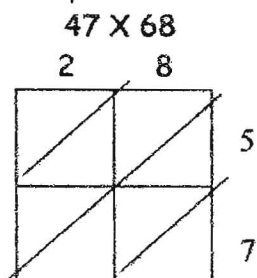
Lattice Multiplication = an algorithm that reduces multi-digit problems to single-digit multiplication tasks

- ✖ Lattice Multiplication is a method that originated in the 1200s
- ✖ It is a quicker way to solve double, triple, or ANY digit of multiplication problems
- ✖ You don't have to worry about place values = less errors
- ✖ It isn't a technique to replace the 'old' way; its simply an alternative strategy
- ✖ Would be useful learning in higher grades

How To:

1. Make a table according to the number of digits in the problem. Write one of the numbers across the top, one digit per each square, and the other down the right in the same way.
2. Diagonally divide EACH interior square from bottom left to top right

Examples:



3.

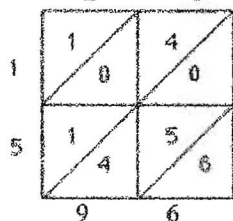
	2	8	
5			
7			

Using 28×57 , break down each square by multiplying the top digit by the right digit. You can start anywhere. Lets take the 2×5 . We get 10 so we write 1 above the diagonal line and 0 below. Next, $8 \times 5 = 40$. $2 \times 7 = 14$ and $8 \times 7 = 56$. See how the problem was broken down into basic problems and how the answers are written above and below the diagonal lines

4.

	2	8	
1			
5			

The sum along each diagonal is then recorded as shown below and these digits 1, 5, 9 and 6 form the answer to the multiplication.



Thus $28 \times 57 = 1596$