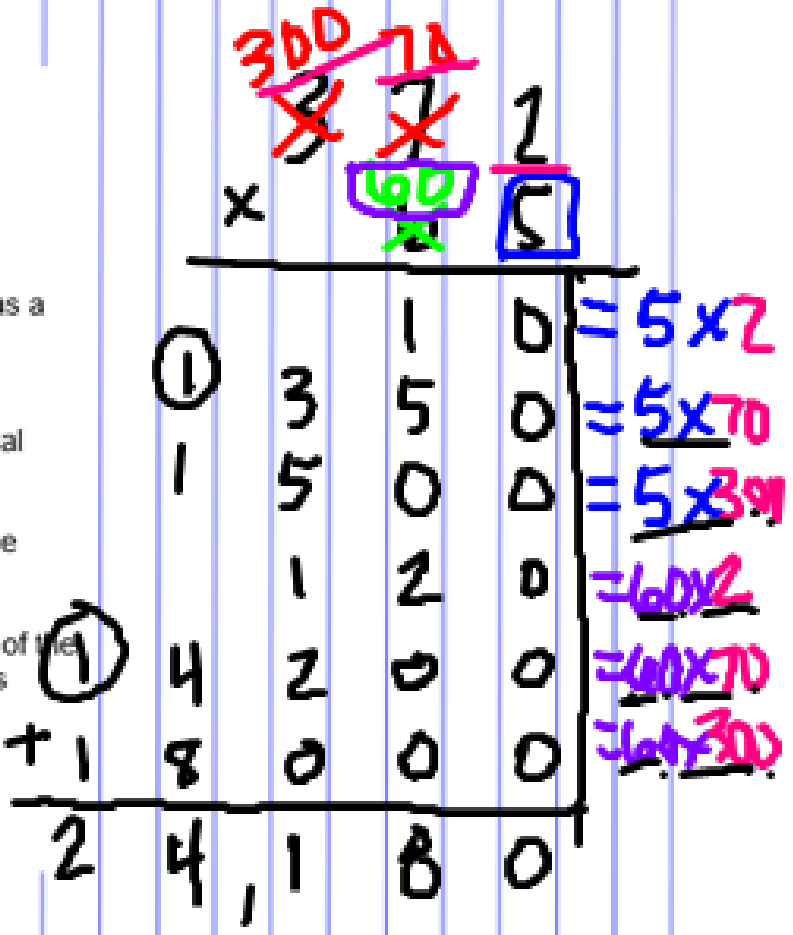
NBT.5 Expanded Algorithm

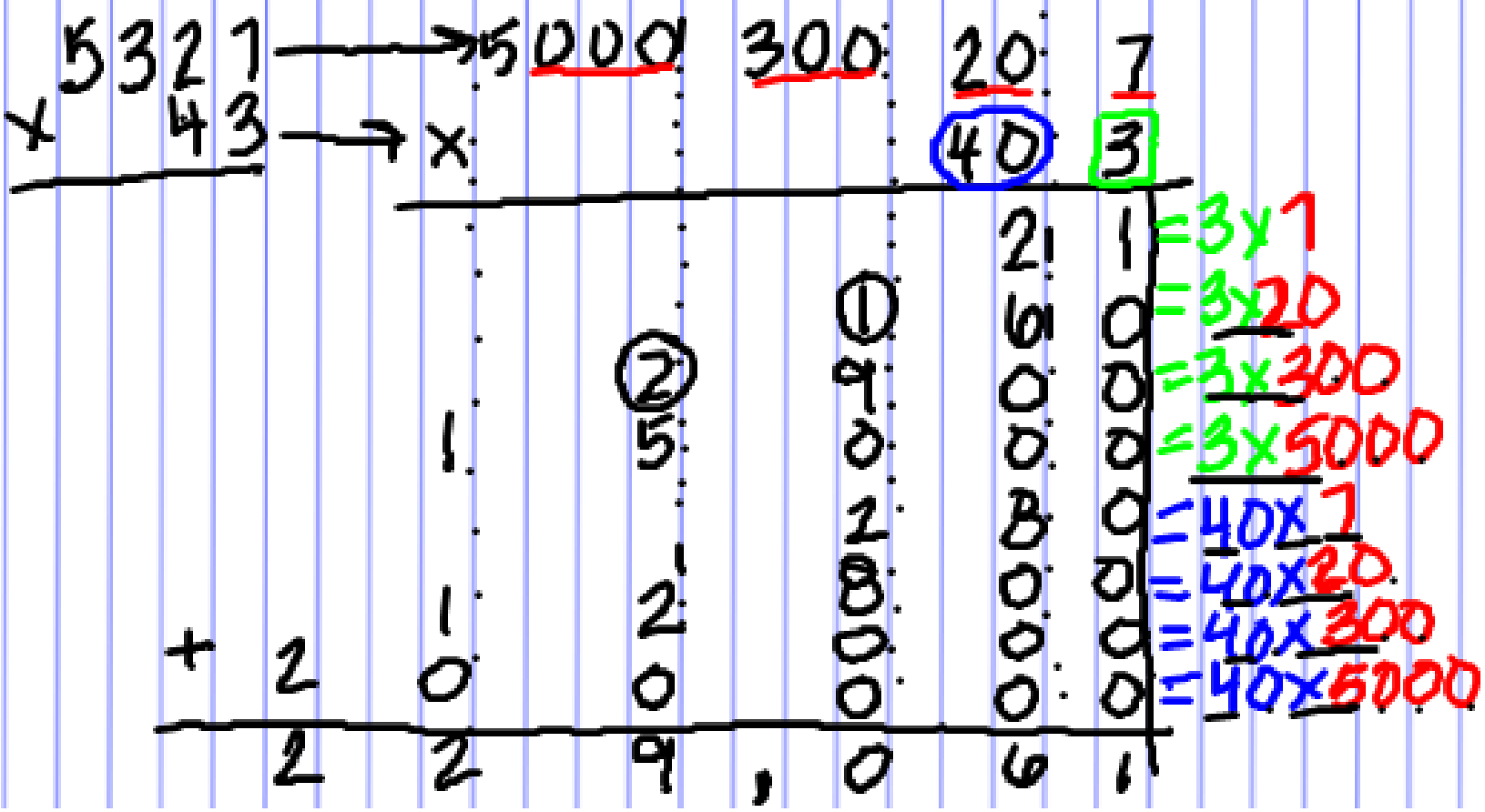
Steps to Success for Expanded Algorithm

1. Cross out the digits in each place value of the top number and write their values.
2. Cross out the digits in each place value of the bottom number and write their values.
3. Multiply the bottom ones digit by the top ones digit, write the complete number below as a partial product. **DO NOT CARRY**
4. Continue the process by multiplying the bottom ones digit by the top value of the tens, hundreds, and thousands. Each time write the complete number below the previous partial product. **DO NOT CARRY**
5. Now multiply the value of the bottom tens digit but the top ones digit, write the complete number below as a partial product. **DO NOT CARRY**
6. Continue the process by multiplying the bottom value of the tens digit by the top value of the tens, hundreds, and thousands. Each time write the complete number below the previous partial product. **DO NOT CARRY**
7. Repeat process if need to multiply the value of the bottom hundreds digit.
8. Add all partial products making sure each are aligned by place value.



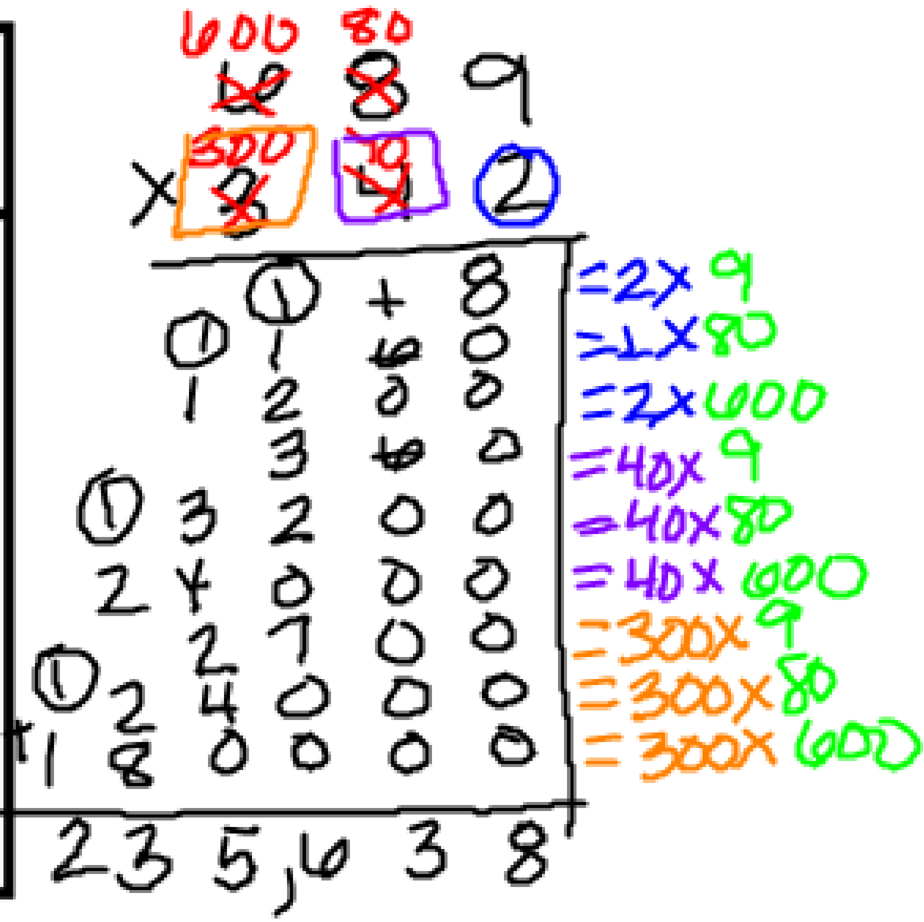
Version 2

Instead of crossing out → use expanded form



Solve the multiplication problem under the flap.

689 x 342 =



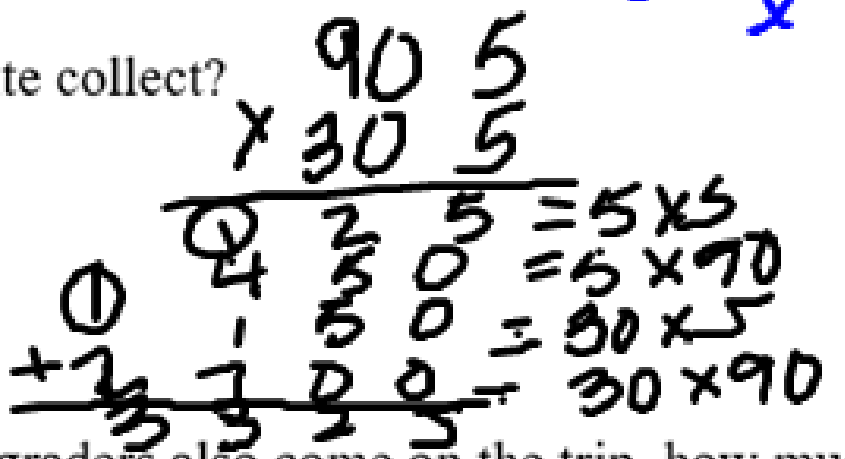
Field Trip Funds

Mrs. White is planning a field trip for the 5th grade students at Sunshine Elementary School. There are 95 students in the 5th grade. The trip costs $35 per student.

How much money will Mrs. White collect?

expanded

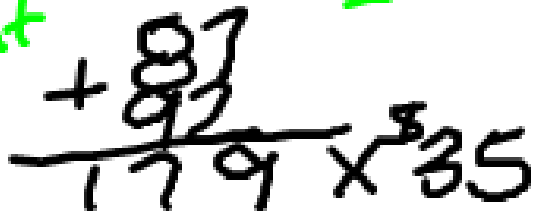
$3,325

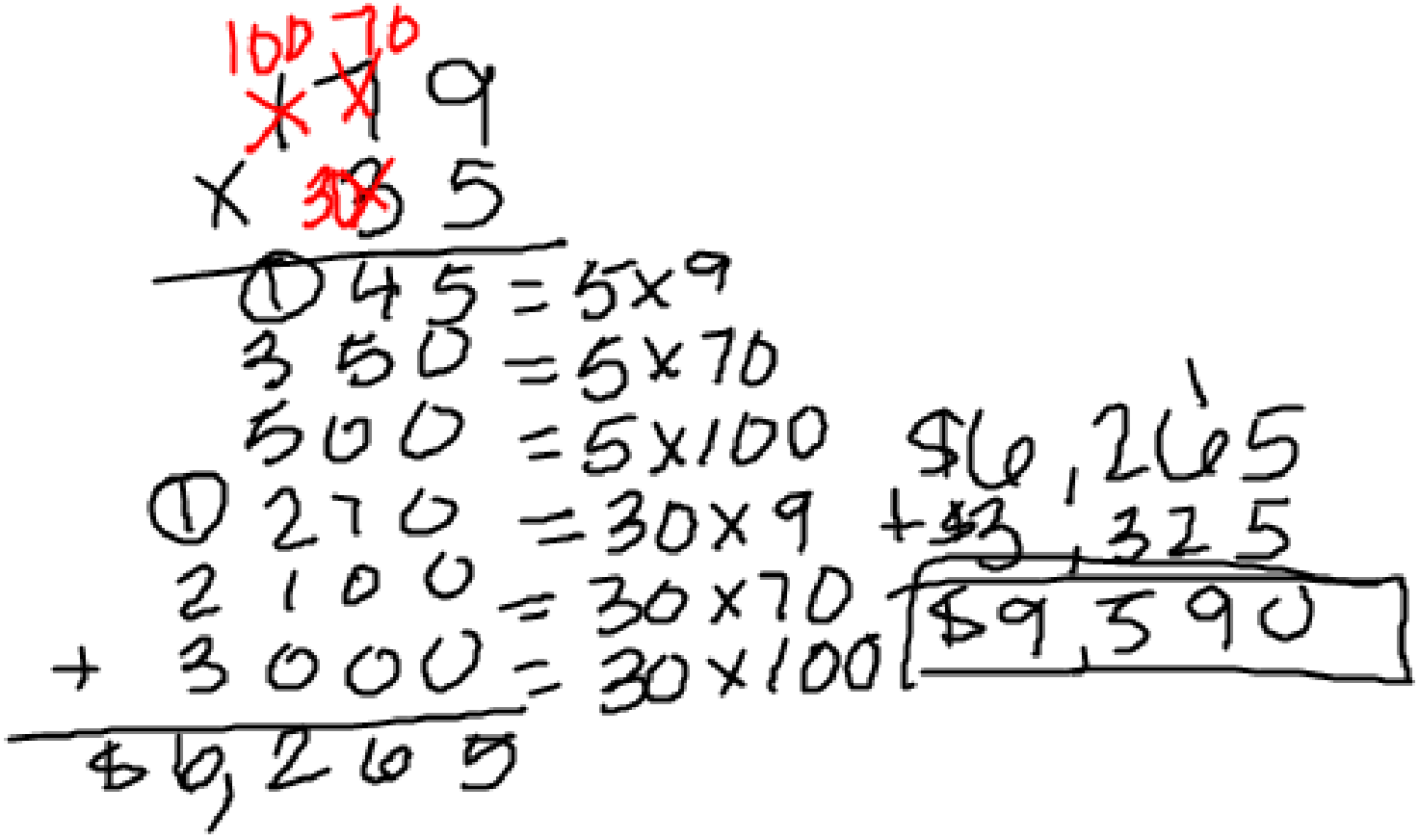


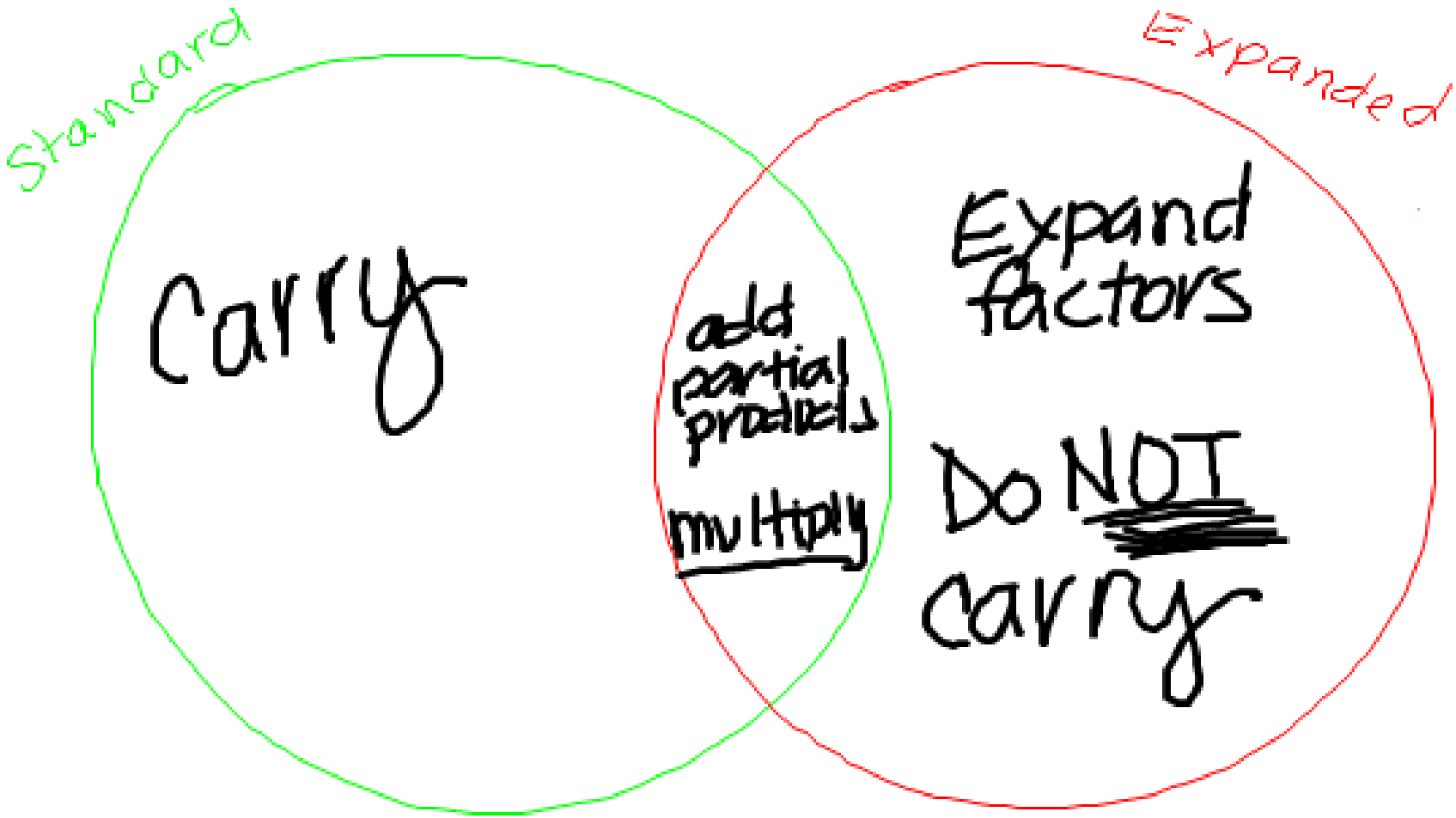
If 87 third graders and 92 fourth graders also come on the trip, how much money will Mrs. White collect?

$35.00/student

expanded




100 70
× 79
× 30 5
45 = 5×9
350 = 5×70
500 = 5×100
270 = 30×9
2100 = 30×70
+ 3000 = 30×100
$6,265
$6,265
+ 3,325
$9,590


Standard
Expanded
Carry
add partial products
multiply
Expand factors
Do NOT carry

Practice Problem - Expanded Algorithm

① 92×53

$92 \rightarrow 90 + 2$

$53 \rightarrow 50 + 3$

			$6 = 3 \times 2$
		$2\ 7\ 0$	$= 3 \times 90$
		$1\ 0\ 0$	$= 50 \times 2$
$+\ 4$	$5\ 0\ 0$		$= 50 \times 90$
$4,$	$8\ 7\ 6$		

② 562×315