

Use place value understanding and properties of operations to perform multi-digit addition, subtraction, multiplication, and division using a one-digit divisor (Standards 4.NBT.4–6).

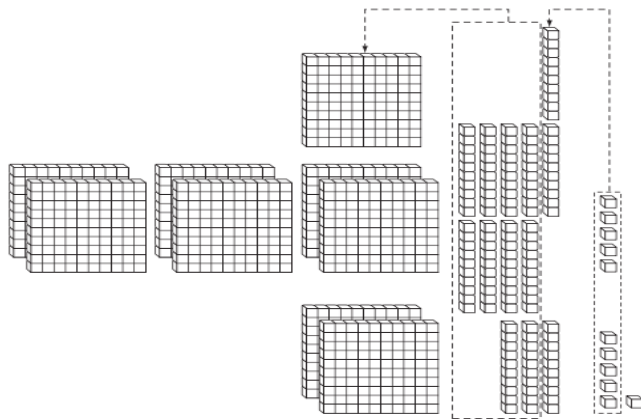
Standard 4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Please Note: Expectations in this strand are limited to whole numbers less than or equal to 1,000,000.

Key Elements: Find the sum of two whole numbers up to 1,000,000.

Base Ten Blocks and Addition Regrouping – Using base ten blocks, add each place value and regroup if needed. Starting at the ones place value, determine whether or not there are more than 10 blocks. If so, circle the ten blocks and move the left-over blocks to the tens place value. Follow the same procedure with each place value until all values have been added. Ten blocks into ten one

Add $695 + 236 =$



	H	T	O
	□	□	
	6	9	5
+	2	3	6

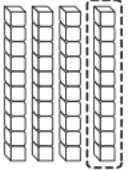

Subtotals Method – Subtotal Method has the students add each digit identifying its value. The students will follow the same procedure moving from digit to digit identifying their value and placing it below the total line. After all values have been added, students will add all the values together to get the sum of the problem. The method can be started at either the left or the right. The example starts adding the thousands column first. An example of this model is as follows:

Step 1	Step 2	Step 3	Step 4	Step 5
4,592	4,592	4,592	4,592	4,592
<u>+3,827</u>	<u>+3,827</u>	<u>+3,827</u>	<u>+3,827</u>	<u>+3,827</u>
7,000	7,000	7,000	7,000	7,000
	1,300	1,300	1,300	1,300
		110	110	110
			9	9
				<u>+ 9</u>
				8,419

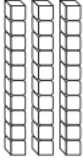

Base Ten Blocks with Subtraction Regrouping - Using base ten blocks, subtract each place value and regroup if needed. When regrouping, students will break-apart a tens rod making 10

ones and then subtract. This is called ungrouping. This procedure will continue with each place value until all the digits have been subtracted.



Subtract $41 - 27 =$

Tens	Ones
	

Tens	Ones
□	□
4	1
2	7

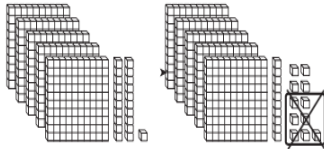
Tens	Ones
	

Tens	Ones
3	11
4	1
2	7

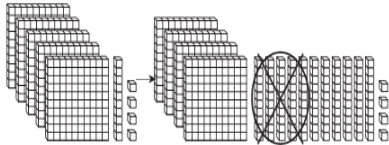
Tens	Ones
	

Tens	Ones
3	11
4	1
2	7
	4

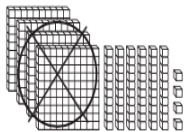
STEP 1 Model 521. There are not enough ones to subtract 7, so regroup the tens.
 2 tens 1 one = 1 ten 11 ones
 Subtract the ones.



STEP 2 There are not enough tens to subtract 5 tens, so regroup the hundreds.
 5 hundreds 1 ten = 4 hundreds 11 tens
 Subtract the tens.



STEP 3 Subtract the hundreds.



H	T	O
□	□	□
5	2	1
3	5	7

Addition and Subtraction as Inverse Operation – Define inverse operation (as . . .) and teach students about the break-apart drawings to help show inverse relationships. The model shows three numbers and their relationship to one another. Students will look for a way to solve the unknown. An example of the break-apart model is as follows: