3rd Grade
MATH - 1st Quarter Follow-Up

During the 1st quarter, PROOF DRAWINGS and STRATEGIES for ADDING were two major concepts covered in math. Below you will find an explanation and pictures that help explain these two concepts. Please continue to review these with your child at home.

PROOF DRAWING – a drawing or picture to prove or show that your answer is correct.

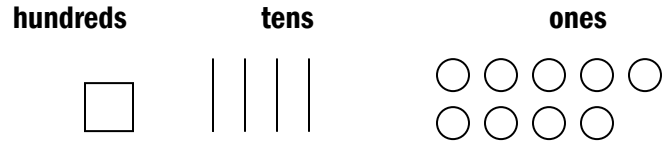
Example: 149 + 273 = 422
We will use a proof drawing to PROVE the sum (answer) is 422

a circle is used to represent ONES ○

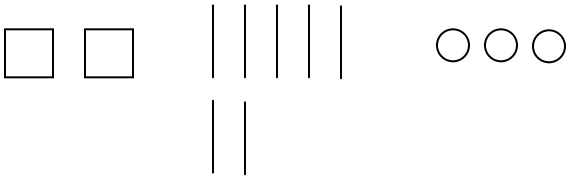
a line is used to represent a TEN-STICK |

a square is used to represent a HUNDRED □

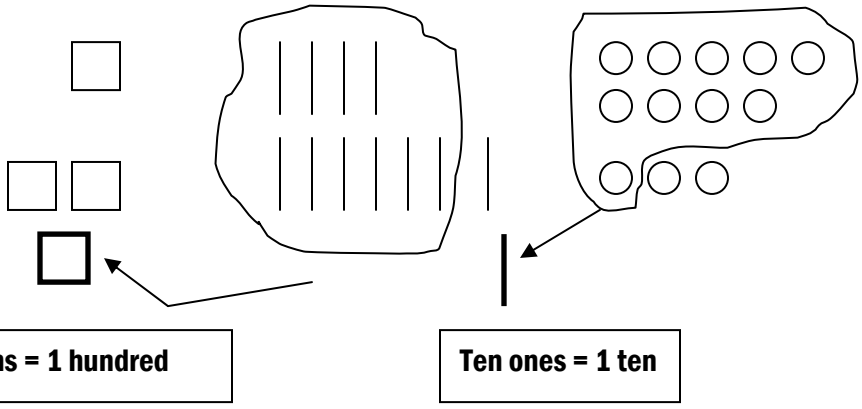
Step 1: make a place value drawing for 149



Step 2: make a place value drawing for 273



Step 3: make groups of TEN starting with the ones



Step 4: compare picture to answer to PROVE the sum = 422

4 hundreds	2 tens	2 ones
	= 422	

Math Expressions teaches 3 different ways to add multi-digit numbers: 1) ALL TOTALS METHOD, 2) NEW GROUPS ABOVE METHOD, and 3) NEW GROUPS BELOW METHOD . The students are given many opportunities to practice each method, and when given a choice, they can choose which method works best for them.

Example: 249 + 386

ALL TOTALS METHOD

In this method, each individual place value column is added and the total is recorded. Then all those totals are added together for the final sum (answer).

```
  249
+ 386
-----
  500   2 hundreds + 3 hundreds = 5 hundreds
  120   4 tens + 8 tens = 12 tens
+  15   9 ones + 6 ones = 15 ones
-----
  635
```

NEW GROUPS BELOW METHOD

In this method, the sum that results from adding the ones (or tens), even after regrouping is clearly visible. Students may find it easier to add the new 1 last, after adding the other numbers in the column.

```
  249
+ 386
  1 1
-----
  635
```

In the above example, students would add 4 tens and 8 tens to get 12 tens and then simply add 1 more ten.

In the above example, the 15 that results from adding 9 ones and 6 ones is clearly visible with the NEW GROUPS BELOW METHOD.

NEW GROUPS ABOVE

This method is the same as the New Groups Below except the new ten is written AT THE TOP of the COLUMN, rather than beneath the column. This method is considered the traditional algorithm.

In this example, you would add 1 ten and 4 tens to get 5 tens. The you must remember that sum and add it to 8 tens.

```
  1 1
  249
+ 386
-----
  635
```