



# MATH NEWS



Grade 2, Module 4, Topic A

December 2013

## 2<sup>nd</sup> Grade Math

Module 4: Addition and Subtraction within 200 with Word Problems to 100

### Math Parent Letter

This document is created to give parents and students a better understanding of the math concepts found in the material taught in the classroom. Module 4 of the material covers strategies for adding and subtracting within 200. This newsletter will discuss Module 4, Topic A.

Topic A. Sums and Differences within 100

### Words to know

- Base Ten
- Compose (bundle)
- Decompose (unbundle)
- Addition
- Subtraction
- Place Value Mat
- Minuend
- Subtrahend
- Equation

### Things to remember!!!

Remember when to *bundle*(compose)

10 ones = 1 ten

10 tens = 1 hundred

10 hundreds = 1 thousand

It is possible to *Unbundle*

1,000 unbundled is 10 hundreds, 100 tens, or 1,000 ones

100 unbundled is 10 tens or 100 ones.

10 unbundled is 10 ones

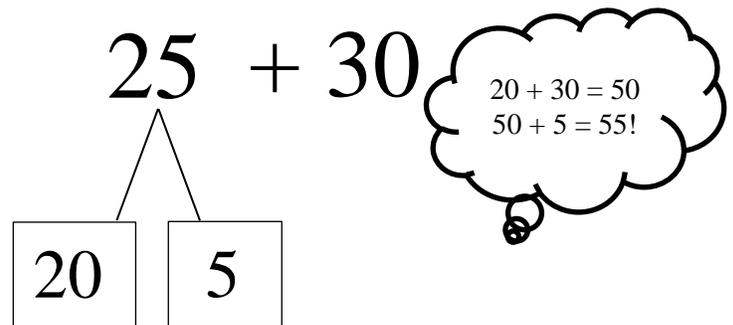
### Objectives of Topic A

- 1 Relate 1 more, 1less, 10 more, 10 less to addition and subtraction of 1 and 10.
- 2 Add and subtract multiples of 10 including counting on to subtract.
- 3 Add and subtract multiples of 10 and some ones within 100.
- 4 Solve one-and two- step word problems within 100 using strategies based on place value.

## Focus Area of Topic A

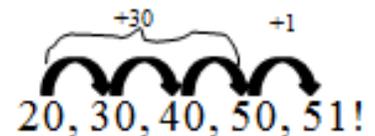
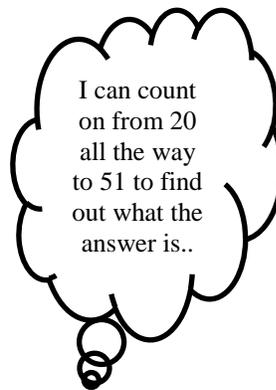
Using place value strategies to add and subtract two-digit numbers

They can add and subtract using number bonds to compose (bundle) or decompose (unbundle).



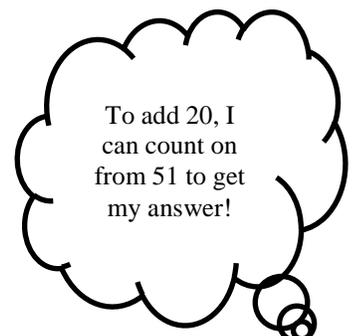
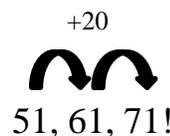
Counting on can also be helpful when adding or subtracting.

$$51 - 20 = ?$$



$$51 - 20 = 31!$$

$$51 + 20 = ?$$



Students relate one-more one-less and ten-more ten-less to addition and subtraction. They recognize that they must add and subtract like units, and that the digit in the tens place changes when adding and subtracting a ten, just as the digit in the ones place changes when adding or subtracting a one. They learn to record the addition and subtraction of tens and ones using arrow notation.

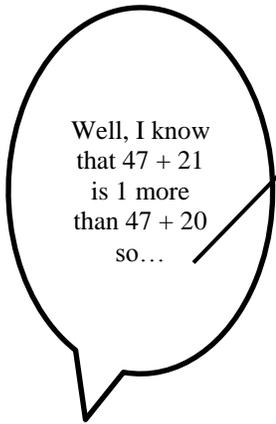
Arrow Notation

$$\underline{59} \xrightarrow{+10} \underline{69} \xrightarrow{+10} \underline{79}$$

$$\underline{38} \xrightarrow{-1} \underline{37} \xrightarrow{-1} \underline{36}$$

If a child has to add  $47 + 21$ , they can use the answer to  $47 + 20$  to help them by just adding one more to that answer. Here's how:

$$47 + 21 = ?$$



$$47 \xrightarrow{+10} 57 \xrightarrow{+10} 67 \text{ + one more}$$

$$47 + 21 = 68$$

Students will also be asked to show their thinking when adding and subtracting multiples of 10 and some ones by using tape diagrams in this module. They will be using the strategy one more, one less in some scenarios with tape diagrams also.

EX: If I add the same number amount to both numbers, the difference stays the same.



$$62 - 30 = 32$$

Carlos has 32  
+-shirts left.

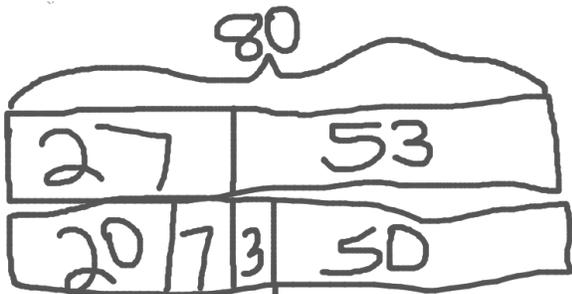
Students will finally be expected to use all of the strategies that they have learned in Topic A to solve one- and two- step word problems. Some scenarios will allow the student to choose their method while others will specify which strategy to use. The students should be able to solve problems using more than one strategy.

27 markers were in a crate. Sandra added 53 to it. How many markers are in the crate now?

The arrow way:

$$27 \xrightarrow{10} 37 \xrightarrow{10} 47 \xrightarrow{10} 57 \xrightarrow{10} 67 \xrightarrow{10} 77 \xrightarrow{1} 78 \xrightarrow{1} 79 \xrightarrow{1} 80$$

Tape Diagram:



Number Bond:

