DUVAL Math Parent Tips

DUVAL COUNTY
PUBLIC SCHOOLS

Addition and Subtraction within 200 with Word Problems to 100

Students will work on fluency in addition and subtraction up to 100. They will also build conceptual understanding of adding and subtracting multi-digit numbers to 200, and will apply their skills when solving problems.

Second Grade, Module 4

<u>**What Came Before this Module:**</u> Students expanded their understanding of unit and of place value by bundling ones, tens, and hundreds with sticks.

<u>**What Comes After this Module**</u>: In Module 5, we will continue to strengthen and deepen our conceptual understanding of addition and subtraction, working with numbers up to 1000.

Words to Know

Minuend: A quantity or number from which another number is to be subtracted

Subtrahend: A quantity or number being subtracted from another

Difference: The solution to a subtraction problem

Place value: Referring to the unit value of each digit in a given number

Place Value Chart: A graphic organizer that students can use to see the coherence of place value and operations between different units.

Special points of interest:

✓ Words to Know

✓ Strategies for Decomposing tens and hundreds

✓ Use place value strategies to add and subtract two-digit numbers .

✓ Mathematical Practices

✓ Want to learn more about DUVAL Math?

Questions?

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| Hundreds	Tens	Ones

Strategies for Decomposing Tens and Hundreds

Using number disks on a place value chart, students review the concept that a unit of 100 is comprised of 10 tens. They then model 1 hundred as 9 tens and 10 ones and practice counting to 100 both ways (i.e., 10, 20, 30...100 and 10, 20...90, 91, 92, 93...100). Next, they model the decomposition of a hundred in one of 2 different strategies as they represent subtraction from 200.

Strategy 1: Decompose 100 as 10 tens and then decompose 1 ten as 10 ones.

100 = 10 tens
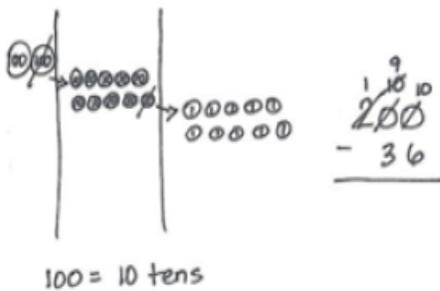
Strategy 2: Decompose 100 as 9 tens and 10 ones.

100 = 9 tens 10 ones
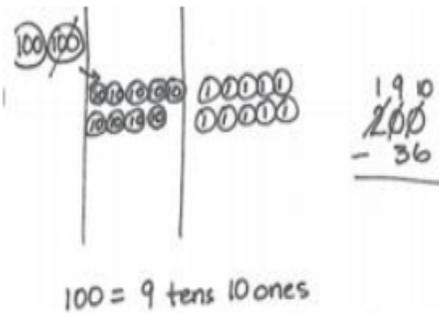
Students use this same reasoning to subtract from numbers that have zero tens.

Words to Know:

Decomposition means to take numbers apart in a problem to make it easier to understand and solve.

"Say Ten" way

Say Ten Counting
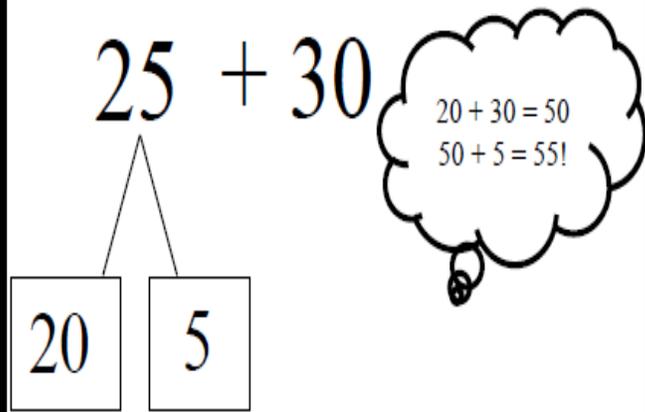
ten one = 11

ten two = 12

MATH ROCKS

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

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

$$25 + 30$$

20 + 30 = 50
50 + 5 = 55!

20   5

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.
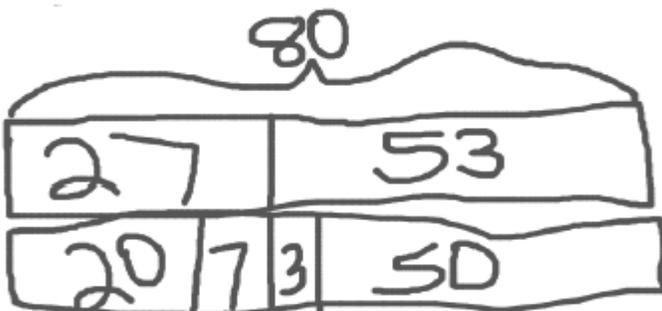
10 unbundled is 10 ones

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?
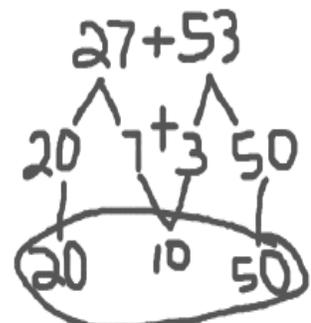
The arrow way:

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

Tape Diagram:

Number Bond:

Standards for Mathematical Practice

Mathematical Practices Addressed in this Module:

MP.1 Make sense of problems and persevere in solving them. Students solve two-step word problems, and are challenged to make sense of more complex relationships within situations. They flexibly solve problems with a variety of strategies at their disposal, sometimes finding many ways to solve the same problem.

MP.2 Reason abstractly and quantitatively. Students reason abstractly when they represent two-step problems and harder problem types with drawings such as tape diagrams and when they relate those drawings to equations. As the Module progresses, students move back and forth between concrete, pictorial, and abstract work to make sense of quantities and their relationships in problem situations.

MP.3 Construct viable arguments and critique the reasoning of others. Students construct viable arguments when they use place value reasoning and properties of operations to explain why their addition and subtraction strategies work, and when they use that reasoning to justify their choice of strategies in solving problems. They critique the reasoning of others when they use those same concepts to disprove or support the work of their peers.

MP.4 Model with mathematics. Students model with mathematics when they write equations to solve two-step word problems, make math drawings when solving a vertical algorithm, or when they draw place value charts and disks to represent numbers. .

MP.6 Attend to precision. Students attend to precision when they label their math drawings and models with specific place value units. They calculate accurately and efficiently when adding numbers within 200 and they use the relationship between addition and subtraction to check their work.

Want to learn more about DUVAL Math? A great resource can be found following the link below:

http://www.duvalschools.org/Page/17706

Elementary Mathematics: Parent Partnerships for Success Grades K-2 and