

We continue working on estimating and finding actual sums/differences. Using estimation will help us check for reasonableness when adding and subtracting. By estimating first, we know what our answer should be close to. If our actual sum/difference is not close to our estimate, we know that something may have gone wrong with our addition/subtraction process.

Mastery of our math facts will be crucial. If we do not have math fact mastery, it will be very easy to add/subtract & regroup incorrectly, and it will also slow us down when we are working.

Addition is usually the easier operation to work with both with adding and adding with regrouping. Subtraction, the inverse operation, is more challenging since the process of regrouping depends on the values of the digits involved and varies as a result.

Please take note of the model provided. I am very aware that the way we were taught is slightly different from what I model in class. The model has mathematical reasons. When we were taught, we were taught the process, but not the reasons for the process. My goal is to teach the regrouping process in a way for students to understand WHY they do what they do. Once understanding is in place, then shortcuts can be made if students have shown that they understand and can solve problems correctly.

When we adults are adding and we regroup, we trade and add a 1 above the next column. This is a shortcut. We are not trading for a one, but a 10, 100, 1,000...The model I use in class shows this correct trade so that students can

understand why the “1” is up in the air. This is very helpful for those who are still struggling with regrouping. The zeroes also serve as place holders to help students regroup correctly. When we use our base ten math manipulatives, students are able to concretely trade when they have enough blocks to do so. Representing the 10, 100, 1,000...when we are regrouping/trading using the standard algorithm allows the process to make more sense. Since the process is more meaningful, students are able to regroup more accurately and more consistently, especially if they have been struggling before.

This is what you will see:

This is what you are used to:

10	110	1	11
206	296	206	296
<u>+ 328</u>	<u>+ 328</u>	<u>+ 328</u>	<u>+ 328</u>
534	624	534	624

The model on the left is used to show regrouping/trading for the correct values.

When it comes to subtraction, the process isn't much different from what we are familiar with, however, showing correct values is very important. There will be some shortcuts that we will not take. I want to make sure that students understand the abstract process which matches their concrete use of their manipulatives as opposed to just “memorizing and doing” as this strategy doesn't always work.

This is what you will see:

$\begin{array}{r} 1 \ 11 \\ 5\cancel{2}1 \\ - 203 \\ \hline 318 \end{array}$	$\begin{array}{r} 11 \\ 8 \ / \ 1 \ 11 \\ 9\cancel{2}1 \\ - 328 \\ \hline 593 \end{array}$	$\begin{array}{r} 9 \\ 8 \ 10 \ 10 \\ 9\cancel{0}0 \\ - 434 \\ \hline 466 \end{array}$	$\begin{array}{r} 12 \\ 8 \ 2 \ 12 \\ 9\cancel{3}2 \\ - 456 \\ \hline 476 \end{array}$
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When you are helping your child with their homework, please try to use the same model we are using in class. I know sometimes that parents will share what they were taught, and that is great that you are sharing with your child, however, there are times when this can lead to confusion. Also, if students are not able to explain their shortcut or the reasons behind the shortcut accurately, I will ask them not to use them. This helps students to be less confused. Once their understanding of the process is in place, then we may discuss and use shortcuts.

Math facts quizzes: review of +/- facts. Students will have 30 +/- problems and will have 2 minutes to complete their page. In a few weeks we will switch to multiplication/division facts.