

LETTER HOME

Decimals

Dear Family Member:

In this unit, students will work with decimals and develop strategies for adding, subtracting, multiplying and dividing with decimals. Students start by connecting decimals to their understanding of fractions and making connections among different representations. Research indicates that students with a foundational understanding of decimals can learn computational procedures and solve problems involving decimals more effectively (National Research Council, 2001).

Students will then use these representations, various contexts, and their understanding of place value to develop mental math and paper-and-pencil strategies for all the operations. For example, in Lesson 8, students develop a strategies menu for adding and subtracting decimals.

Subtracting Decimals

<p>Estimating</p> $0.35 - .18$ <p>.35 - .18 is close to 0.15 because .18 is almost 0.2. .35 - .2 = .15</p>	<p>Number Line or Counting Back</p> $0.35 - 0.18 = 0.17$ <p>$0.35 - 0.1 - 0.1 + 0.02 = 0.17$</p>				
<p>Using Models</p> $0.35 - 0.18 = .17$	<p>Using Paper and Pencil</p> <p>0.35 subtract 0.18</p> <table><tr><td>Compact</td><td>Expanded Form</td></tr><tr><td>$\begin{array}{r} 2 \overline{)0.35} \\ -0.18 \\ \hline 0.17 \end{array}$</td><td>$\begin{array}{l} 0.35 = 0.3 + .05 = 0.2 + .15 \\ 0.18 = 0.1 + .08 = 0.1 + .08 \\ \hline 0.1 + .07 = 0.17 \end{array}$</td></tr></table>	Compact	Expanded Form	$\begin{array}{r} 2 \overline{)0.35} \\ -0.18 \\ \hline 0.17 \end{array}$	$\begin{array}{l} 0.35 = 0.3 + .05 = 0.2 + .15 \\ 0.18 = 0.1 + .08 = 0.1 + .08 \\ \hline 0.1 + .07 = 0.17 \end{array}$
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You can help your child by providing additional mathematics opportunities at home. For example:

- **Measure.** Help you child measure the same distance in meters, centimeters, and millimeters.
- **Play *Start, Hop, Stop to Hundredths*.** Players use a spinner to determine moves on a number line. Directions, spinners, and game boards are in the *Student Activity Book*.
- **Use Different Strategies.** Ask you child to show you how to solve a problem using a mental math and a paper-and-pencil strategy. A student that uses a mental math strategy may draw a model or make some notes. These models encourage students to develop a visual model of numbers.

Math Facts and Mental Math

This unit continues the systematic review and assessment of the multiplication and division facts.

Multiplication Facts. Students review all the multiplication facts to maintain and increase fluency and to learn to apply multiplication strategies to larger numbers.

You can help your child review these facts using the flash cards that are sent home or by making a set of flash cards from index cards or scrap paper. Study facts in small groups each night and focus only on those facts that your child needs to learn. As your child goes through the flash cards, put the cards in three stacks: Facts I Know Quickly, Facts I Can Figure Out, and Facts I Need to Learn.

For Facts I Need to Learn, work on strategies for figuring them out. If there are many multiplication facts that your child still needs to learn, divide them into smaller groups of facts. Choose groups of facts that lend themselves to the use of the same strategy and focus on one group at a time.

For Facts I can Figure Out, use the flash cards to practice the facts for fluency.

For Facts I Know Quickly, help your child use mental math strategies to multiply 10s and 100s. You can also help your child extend and deepen understanding by asking him or her to choose a multiplication fact that was difficult to learn and describe strategies used for learning the fact.

Division Facts. Students review all the division facts to maintain and increase fluency and to learn and apply multiplication and division strategies to larger numbers.

You can help your child review these facts using the flash cards that are sent home or by making a set of flash cards from index cards or scrap paper. Study facts in small groups each night. As your child goes through the flash cards, put the cards into three stacks: Facts I Know Quickly, Facts I Can Figure Out, and Facts I Need to Learn.

For the Facts I Need to Learn, work on strategies for figuring them out. Good strategies include:

Turn-around facts. To solve $42 \div 6$: I know $6 \times 7 = 42$, so $42 \div 6 = 7$.

Reasoning from known facts. To solve $28 \div 4$: I know $28 \div 2 = 14$ so $28 \div 4$ is half of 14 or 7.

For Facts I Can Figure Out, use the flash cards to practice the facts for fluency.

For Facts I Know Quickly, help your child use mental math strategies to divide 10s and 100s:

$$320 \div 40 = 8; 4200 \div 700 = 6$$

Thank you for taking time to talk with your child about what he or she is learning in math.

Sincerely,