5th Grade Mathematics
PARENT GUIDE - UNIT 2: Decimals

IMPORTANT CONCEPTS YOUR STUDENT SHOULD KNOW AND ACTIVITIES TO DO AT HOME

Understanding Decimals

Important Concepts Addressed in this Unit

I can read and write decimals to the thousandths place using base-ten numerals, number names and expanded form. **I can** compare decimals to the thousandths using the <, +, and > symbols. **I can** round decimals up to the thousandths place.	**I can** add decimals to the hundredths place. **I can** subtract decimals to the hundredths place. **I can** explain how I add and subtract decimals.

Key Words To Know

How You Can Help Your Student

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Decimal, round, expanded form, hundredths, thousandths
 	
	Interactive Learning Games: Playing games and working with money is a wonderful way to practice skills at home in a fun environment.
	 Common Misconceptions: Students might compute the sum or difference of decimals by lining up the right-hand digits as they would whole number. For example, in computing the sum of 15.34 + 12.9, students will write the problem in this manner:
	     15.34
	     + 12.9
	     16.63
	 To help students add and subtract decimals correctly, have them first estimate the sum or difference. Providing students with a decimal-place value chart will enable them to place the digits in the proper place.
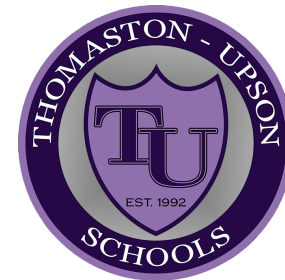
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Sample Problems

Some equivalent forms of 0.72 are:

$\frac{72}{100}$ $\frac{70}{100} + \frac{2}{100}$

$\frac{7}{10} + \frac{2}{100}$ 0.720

$7 \times (\frac{1}{10}) + 2$ $7 \times (\frac{1}{10}) + 2 \times (\frac{1}{100}) + 0 \times (\frac{1}{1000})$

$\times (\frac{1}{100})$ $\frac{720}{1000}$

0.70 + 0.02

Students need to understand the size of decimal numbers and relate them to common benchmarks such as 0, 0.5 (0.50 and 0.500), and 1. Comparing tenths to tenths, hundredths to hundredths, and thousandths to thousandths is simplified if students use their understanding of fractions to compare decimals.

Comparing 0.25 and 0.17, a student might think, "25 hundredths is more than 17 hundredths". They may also think that it is 8 hundredths more. They may write this comparison as 0.25 > 0.17 and recognize that 0.17 < 0.25 is another way to express this comparison.

Round 14.235 to the nearest tenth.
Students recognize that the possible answer must be in tenths thus, it is either 14.2 or 14.3. They then identify that 14.235 is closer to 14.2 (14.20) than to 14.3 (14.30).
Students should use benchmark numbers to support this work. Benchmarks are convenient numbers for comparing and rounding numbers. 0, 0.5, 1, 1.5 are examples of benchmark numbers.

Add and Subtract decimals.
Example: 4 - 0.3
  3 tenths subtracted from 4 wholes. One of the wholes must be divided into tenths. (The solution is 3 and $\frac{7}{10}$ or 3.7.)

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