

Unit 6 Chapter 03 Add and Subtract Decimals

Content Area: **Mathematics**
Course(s): **Math 5**
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Status: **Published**

Unit Summary

In this unit, students will extend their understanding of decimal place value to thousandths and take time to relate the decimal places of tenths, hundredths, and thousandths to the base ten system. They will understand place values change in the same way on both sides of the decimal point - that each place value has a value of 10 times that of the place to its right, and conversely, that each place value has a value $\frac{1}{10}$ that of the place to its left. They will be comparing decimal amounts using terms like less than, greater than and equal to.

Students will also add and subtract decimal amounts as well as check their work with estimating techniques. Students will first do this work through modeling and then with standard addition and subtraction algorithms. They will apply these skills to real world multi-step addition and subtraction word problems.

Student Learning Objectives

Students will learn to:

- model, read, and write decimals to thousandths.
- read and write decimals through thousandths.
- compare and order decimals to thousandths using place value.
- round decimals to any place.
- model decimal addition using base-ten blocks.
- model decimal subtraction using base-ten blocks.
- make reasonable estimates of decimal sums and differences.
- add decimals using place value.
- subtract decimals using place value.
- identify, describe, and create numeric patterns with decimals.
- solve problems using the strategy *make a table*.
- choose a method to find a decimal sum or difference.

Essential Questions

- How can you describe the relationship between two decimal place-value positions?
- How do you read, write, and represent decimals through thousandths?
- How can you use place value to compare and order decimals?
- How can you use place value to round decimals to a given place?
- How can you use base-ten blocks to model decimal addition?
- How can you use base-ten blocks to model decimal subtraction?
- How can you estimate decimal sums and differences?
- How can place value help you add decimals?
- How can place value help you subtract decimals?
- How can you use addition or subtraction to describe a pattern or create a sequence with decimals?
- How can the strategy *make a table* help you organize and keep track of your bank account balance?
- Which method could you choose to find decimal sums and differences?

Enduring Understandings

Students will understand that:

- patterns occur in the number of zeros of the product when multiplying a number by powers of 10.
- whole-number exponents denote powers of 10.
- numbers with decimals can be added and subtracted using concrete models, drawings, strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- estimating money amounts can help in real life situations.

Application

Students will be able to independently use their learning to:

- model, read, and write decimals to thousandths.
- compare and order decimals to thousandths using place value.
- round decimals to any place.
- make reasonable estimates of decimal sums and differences.
- add decimals using place value.
- subtract decimals using place value.
- identify, describe, and create numeric patterns with decimals.
- solve problems using the strategy *make a table*.