5 Math Unit 04: Add and Subtract Decimals

Content Area: **Mathematics**
Course(s):
Time Period: **Marking Period 1**
Length: **14 Days**
Status: **Published**

Unit Overview

Adding and Subtracting Decimals

As students approach learning to add and subtract decimals, they are equipped with the understanding of whole-number operations and decimal place value. They have experience with using number lines, grids, and other visual representations to help them add and subtract. Students build on this prior knowledge as they develop strategies for adding and subtracting decimals.

The explorations with multiple representations provide students opportunities to visualize and internalize how decimals behave during addition and subtraction. This allows for a much deeper understanding than merely memorizing and applying algorithms. Students estimate sums and differences by using rounded numbers and compatible numbers. Estimation strategies are taught prior to finding exact results so that students have tools to use to check for reasonableness.

Students learn to find exact sums and differences using multiple representations including tenths and hundredths grids and number lines. Students also learn how to decompose decimals to perform operations on their parts. Allow students plenty of time to explore the strategies in each lesson. When they ultimately use the standard algorithm for each decimal operation, this learning will give them a foundation of deeper understanding.

What Students Are Learning

- **Estimate Sums and Differences of Decimals:** Students use and describe place-value strategies to estimate sums and differences of decimals.
- **Use Representations to Add and Subtract Decimals:** Students use representations including decimal grids and number lines to add and subtract decimals.
- **Use Strategies to Add and Subtract Decimals:** Students use strategies including decomposition, partial sums, and partial differences to add and subtract decimals.

- About How Much?
- Would You Rather?
- Which Benchmark Is It Closest To?
- Can You Make the Number?
- Notice & Wonder
- Numberless Word Problem
- Which Doesn't Belong?

Standards

5.NBT.B.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Materials

Core Materials:

Reveal Math

4.1 Estimate Sums and Differences of Decimals

4.2 Represent Addition of Decimals

4.3 Represent Addition of Tenths and Hundredths

4.4 Use Partial Sums to Add Decimals

4.5 Represent Subtraction of Decimals

4.6 Represent Subtraction of Tenths and Hundredths

4.7 Strategies to Subtract Decimals

4.8 Explain Strategies to Add and Subtract Decimals

Supplemental Materials:

- ST Math
- Happy Numbers
- 3 Act Lessons
- Building Fact Fluency Kit
- Brainingcamp Manipulatives
- Nearpod Lessons
- Brainpop Resources
- Online Resources

Technology

DA	Data & Analysis
	Data can be organized, displayed, and presented to highlight relationships.
8.1.5.DA.1	Collect, organize, and display data in order to highlight relationships or support a claim.
	Individuals can select, organize, and transform data into different visual representations and communicate insights gained from the data.
8.1.5.DA.3	Organize and present collected data visually to communicate insights gained from different views of the data.
8.1.5.DA.4	Organize and present climate change data visually to highlight relationships or support a claim.
8.2.5.ED.2	Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate

	all possible solutions to provide the best results with supporting sketches or models.
8.2.5.ED.3	Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

Assessment

Formative Assessment

- Unit Readiness Diagnostics
- Lesson Checks
- Exit Tickets
- Teacher Observation

Summative Assessment

- Unit Assessment Performance Task
- Benchmark Tests
- Alternative Assessments: Performance Tasks & Projects

Accommodations & Modifications

Special Education

Differentiated Instruction			
Accommodate Based on Students Individual Needs: Strategies			
Time/General • Extra time for assigned tasks • Adjust length of assignment • Timeline with due dates for reports and projects • Communication system between home and school • Provide lecture notes/outline	**Processing** • Extra response time • Have students verbalize steps • Repeat, clarify, or reword directions • Mini-breaks between tasks • Provide a warning for transitions • Reading partners	**Comprehension** • Precise step-by-step directions • Short manageable tasks • Brief and concrete directions • Provide immediate feedback • Small group instruction • Emphasize	**Recall** • Teacher-made checklist • Use visual graphic organizers • Reference resources to promote independence • Visual and verbal reminders • Graphic

		multi-sensory learning	organizers
Assistive Technology • Computer/whiteboard • Tape recorder • Spell-checker • Audio-taped books	**Tests/Quizzes/Grading** • Extended time • Study guides • Focused/chunked tests • Read directions aloud	**Behavior/Attention** • Consistent daily structured routine • Simple and clear classroom rules • Frequent feedback	**Organization** • Individual daily planner • Display a written agenda • Note-taking assistance • Color code materials

504

- In class/pull out support with special ed teacher Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks Graphic organizers
- Vocabulary support Mnemonic devices
- Songs/videos to reinforce concepts Limit number of questions
- Scribe Manipulatives Calculators Reteach pages Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System Another look homework video
- Practice buddy

ELL

- Translation device/dictionary
- In class/pull out support with ESL teacher
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Math Diagnosis & Intervention System

At-risk of Failure

- Additional time during intervention time
- Questions read aloud

- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System
- Another look homework video
- Practice buddy

Gifted & Talented

- Independent projects
- Enrichment pages
- Online games
- Leveled Homework
- Extension Activities
- Today's Challenge

Interdisciplinary Connections

3-5-ETS1-1	Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
RI.MF.5.6	Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears.
SL.PE.5.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.

Career Readiness, Life Literacies & Key Skills

9.2.5.CAP.3	Identify qualifications needed to pursue traditional and non-traditional careers and occupations.
9.2.5.CAP.4	Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements.
9.4.5.CT	Critical Thinking and Problem-solving
9.4.5.CT.1	Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).
9.4.5.CT.4	Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).

9.1.5.FI.1	Identify various types of financial institutions and the services they offer including banks, credit unions, and credit card companies.
9.1.5.PB.1	Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.

Career Ready Practices

STEM CAREER: Veterinarian Student talks about the work of veterinarians. Student subtracts decimals. Student explains how to subtract decimals.

- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP12. Work productively in teams while using cultural global competence.