# 5 Math Unit 04: Multiply Decimals

Content Area: **Mathematics**
Course(s):
Time Period: **November**
Length: **3 weeks**
Status: **Published**

## Unit Overview

General methods used for computing products of whole numbers extend to products of decimals. Because the expectations for decimals are limited to
thousandths and expectations for factors are limited to hundredths at this grade level, students will multiply tenths with tenths and tenths with
hundredths, but they need not multiply hundredths with hundredths. Before students consider decimal multiplication more generally, they can study
the effect of multiplying by 0.1 and by 0.01 to explain why the product is ten or a hundred times as small as the multiplicand (moves one or two places
to the right). They can then extend their reasoning to multipliers that are single-digit multiples of 0.1 and 0.01 (e.g., 0.2 and 0.02, etc.).

How can we use what we know about multiplying whole numbers to multiply decimals?

**Goal**
Students will multiply whole numbers to decimals.

**Students will be able to...**
multiply multi-digit whole numbers

## Standards

| | |
|---|---|
| MA.5.NBT.A.2 | Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. |
| MA.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

- EnVision Math
- 4-1 Multiply Decimals by Powers of 10
- 4-2 Estimate the Product of a Decimal and a Whole Number
- 4-3 Use Models to Multiply a Decimal and a Whole Number
- 4-4 Multiply a Decimal by a Whole Number

- 4-5 Use Models to Multiply a Decimal and a Decimal
- 4-6 Multiply Decimals Using Partial Products
- 4-7 Use Properties to Multiply Decimals
- 4-8 Use Number Sense to Multiply Decimals
- 4-9 Multiply Decimals
- 4-10 Math Practices and Problem Solving: Model with Math
- ST Math
- Happy Numbers
- 3 Act Lessons
- Building Fact Fluency Kit
- Brainingcamp  Manipulatives
- Nearpod Lessons
- Brainpop Resources
- Math Diagnosis and Intervention System
- Online Resources

## Technology

- 8.1.5.A.1,2,4 (solve problems, word processing, databases, spreadsheets)
- 8.1.5.F.1 (digital tools to support scientific finding)
- 8.2.5.C.1,2,3 (solve problems, troubleshoot repair tools)

## Assessment

**Formative Assessment**

- Teacher Observation
- Daily Quick Check
- Quizzes
- Exit Tickets

**Summative Assessment**

- Topic Tests
- Benchmark Tests
- Alternative Assessments: Performance Tasks & Projects

## Accommodations & Modifications

**Special Education**

- Follow IEP Plan which may contain some of the following examples…
- 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

**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
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**Gifted & Talented**

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

## Interdisciplinary Connections

Topic 1 Math and Science Project - Using different presentations tools, students will collect different types of paper. Talk about the uses of
paper. Tell how strong each type of paper is.Tell how the paper feels. Tell if the paper can soak up water.

**ELA:**
NJSLSA.R10. Read and comprehend complex literary and informational texts independently and proficiently with scaffolding as needed.

**Science:**
3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

## 21st Century Life Literacies & Key Skills

**Critical Thinking and Problem Solving:**

Problem-solving activities starting with the lesson “Solve and Share” and ending with higher order thinking questions that utilize the mathematical practices

**Communication and Collaboration:**

Throughout the lesson, students are provided with opportunities to discuss their ideas as they investigate mathematical concepts.

**Creativity:**

Students have opportunities to express their creativity by solving problems their own way, participating in performance tasks, and group projects.

**Technology:**

Use of iPads, instructional apps, lab materials embedded in lessons. Programs such as BrainPop,Math Reflex, Google Slides are used to support instruction.

## Career Ready Practices

- 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.