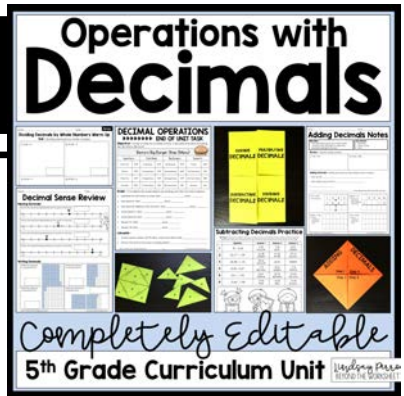


ABOUT THIS RESOURCE



Details :

This 20 day unit covers addition, subtraction and multiplication of decimals as well as division of decimals by whole numbers. If the skills don't completely align to your state standards, that's OK because this resource is 100% editable! All content can be modified to make this unit perfect for your classroom!

Included Resources :

- Weekly warm up recording sheets
- Weekly exit ticket sheets
- Blank lesson plans
- Unit tracking pages
- Unit vocabulary sheet
- Unit pre-assessment
- Warm ups
- Traditional notes
- Fold and Flip Notes
- Practice assignments (HW or CW)
- End of Unit Performance Task
- A complete PDF of the unit
- An editable PPT version of the unit.
- A binder cover and spine labels

Lessons :

- Lesson 1 : Decimal Sense (Review)
- Lesson 2 : Adding Decimals
- Lesson 3 : Subtracting Decimals
- Lesson 4 : Multiplying Decimals by Whole Numbers
- Lesson 5 : Multiplying Decimals by Decimals
- Lesson 6 : Dividing Decimals by Whole Numbers

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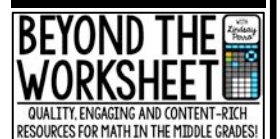
<http://bit.ly/LPerro>

Meet the Author :

My name is Lindsay Perro and I have been an educational writer and content developer since 2009. After spending 8 years as a Middle School Math Teacher and Interventionist, I am now following my passion and focusing on creating quality educational resources to make your job easier and keep students engaged and excited about math!



Lindsay Perro



Decimal Operations

▶▶▶ Unit Plan for 5th Grade Math

**20 DAY
UNIT**

Lesson	Resources
Unit Prep (pgs. 6 – 12)	<ul style="list-style-type: none"> • Weekly Warm Up Sheet • Exit Tickets • Lesson Plan Template • Vocabulary • Pre-Assessment
1) Decimal Sense (pgs. 14 – 18)	<p><i>One Day Quick Review</i></p> <ul style="list-style-type: none"> • Two Warm Ups – Can use one as an exit ticket • Decimal Sense Review Worksheet (2 pages)
2) Adding Decimals (pgs. 19 – 38)	<ul style="list-style-type: none"> • Four Warm Ups • Adding Decimals Notes • Adding Decimals Practice • Adding Decimals Practice - Applications • Adding Decimals Practice – Coloring Page • Adding Decimals with Models Dry Erase Activity • Adding Decimals Puzzle • Adding Decimals Fold and Flip Notes
3) Subtracting Decimals (pgs. 39 – 60)	<ul style="list-style-type: none"> • Four Warm Ups • Subtracting Decimals Notes • Subtracting Decimals Practice • Subtracting Decimals Practice - Applications • Subtracting Decimals Practice – Coloring Page • Subtracting Decimals with Models Dry Erase Activity • Subtracting Decimals Puzzle • Subtracting Decimals Fold and Flip Notes • Adding and Subtracting Decimals Practice • Adding and Subtracting Decimals Quiz
4) Multiplying Decimals by Whole Numbers (pgs. 61 – 67)	<ul style="list-style-type: none"> • Two Warm Ups • Estimating Products Notes • Multiplying Decimals by Whole Numbers Notes • Estimating Products Practice • Multiplying Decimals by Whole Numbers Practice

Decimal Operations

▶▶▶ Unit Plan for 5th Grade Math

Lesson	Resources
5) Multiplying Decimals by Decimals (pgs. 68 – 85)	<ul style="list-style-type: none"> • Two Warm Ups • Multiplying Decimals by Decimals Notes • Multiplying Decimals Practice • Multiplying Decimals Practice - Applications • Multiplying Decimals Practice – Coloring Page • Multiplying Decimals with Models Dry Erase Activity • Multiplying Decimals Puzzle • Multiplying Decimals Fold and Flip Notes
6) Dividing Decimals by Whole Numbers (pgs. 86 – 107)	<ul style="list-style-type: none"> • Four Warm Ups • Dividing Decimals by Whole Numbers Notes • Dividing Decimals by Whole Numbers Practice • Dividing Decimals by Whole Numbers Practice - Applications • Dividing Decimals by Whole Numbers Practice – Coloring Page • Dividing Decimals by Whole Numbers with Models Dry Erase Activity • Dividing Decimals by Whole Numbers Puzzle • Decimal Operations (all four) Fold and Flip Notes • Decimal Operations Applications Practice • Multiplying and Dividing Decimals Quiz
End of Unit (pgs. 108 – 113)	<ul style="list-style-type: none"> • Unit 3 Reference Sheet • Unit 3 Task • Unit 3 Assessment

**20 DAY
UNIT**

Unit 3 : Operations with

PACING CALENDAR

PACING CALENDAR

Unit 3 : Operations with Decimals

Day 1 Topic: Unit Prep Resources: <ul style="list-style-type: none"> Review Unit 2 {Suggested activity – Order of Operations Task Cards} Unit 3 Pre Assessment 	Day 2 Topic: Decimal Sense Resources: <ul style="list-style-type: none"> L1 Warm Up 1 Decimal Sense Review (2 pages) L1 Warm Up 2 as an Exit Ticket
Day 4 Topic: Adding Decimals Resources: <ul style="list-style-type: none"> L2 Warm Up 2 Adding Decimals Practice Applications Worksheet Adding Decimals Practice Coloring Page 	Day 5 Topic: Adding Decimals Resources: <ul style="list-style-type: none"> L2 Warm Up 3 Adding Decimals Fold and Flip Notes Adding Decimals with Models
Day 7 Topic: Subtracting Decimals	Day 8 Topic: Subtracting Decimals

Day 10 Topic: Subtracting Decimals Resources: <ul style="list-style-type: none"> L3 Warm Up 4 Subtracting Decimals Puzzle Adding and Subtracting Decimals Quiz 	Day 11 Topic: Multiplying Decimals by Whole Numbers Resources: <ul style="list-style-type: none"> L4 Warm Up 1 Estimating Products Notes Estimating Products Practice Worksheet 	Day 12 Topic: Multiplying Decimals by Whole Numbers Resources: <ul style="list-style-type: none"> L4 Warm Up 2 Multiplying Decimals by Whole Numbers Notes Multiplying Decimals by Whole Numbers Practice Worksheet
Day 13 Topic: Multiplying Decimals by Decimals Resources: <ul style="list-style-type: none"> L5 Warm Up 1 Multiplying Decimals by Decimals Notes Multiplying Decimals with Models Multiplying Decimals by Decimals Practice Worksheet (worksheet one) 	Day 14 Topic: Multiplying Decimals by Decimals Resources: <ul style="list-style-type: none"> L5 Warm Up 2 Multiplying Decimals by Decimals Practice Worksheet (worksheet two) Multiplying Decimals Coloring Page (optional) 	Day 15 Topic: Dividing Decimals by Whole Numbers Resources: <ul style="list-style-type: none"> L6 Warm Up 1 Multiplying Decimals Puzzle (optional) Dividing Decimals by Whole Numbers Notes Dividing Decimals by Whole Numbers Practice Worksheet
Day 16 Topic: Dividing Decimals by Whole Numbers Resources: <ul style="list-style-type: none"> L6 Warm Up 3 Dividing Decimals with 	Day 17 Topic: Dividing Decimals by Whole Numbers Resources: <ul style="list-style-type: none"> L6 Warm Up 3 Dividing Decimals with 	Day 18 Topic: Dividing Decimals by Whole Numbers Resources: <ul style="list-style-type: none"> L6 Warm Up 4 Decimal Operations

TALKING POINTS

Unit 3 : Operations with Decimals

Tips and Talking Points

LESSON 1 Decimal Sense	<ul style="list-style-type: none"> Discuss where students see decimals in daily life to build a good understanding of decimals and how they are used. Misunderstandings – Some students have a hard time with decimals on number lines that are not fully labeled. They may confuse a decimal such as 2.5 and 3.5 because of the 3 and not paying attention to which side of the line the 3 is on. Encourage student to always "read" the number line and label any unlabeled sections themselves.
LESSON 2 Adding Decimals	<ul style="list-style-type: none"> The key is lining up decimals. Teach students to line up the decimal points so each number they are adding has the same total number of digits. This will help them align the numbers correctly when adding. Common Mistakes – Not lining up the decimal points or not carrying over when adding. Students still do this even when they are properly carrying over and filling in the zeros.

TALKING POINTS

Unit 3 : Operations with Decimals

Tips and Talking Points

LESSON 4 Multiplying Decimals By Whole Numbers	<ul style="list-style-type: none"> Understanding how to estimate the reasonableness of an answer is huge with multiplying decimals. Students should be able to round to predict an answer and then gauge the reasonableness of their answer. If they multiply 8.5 and 3 and get an answer of 255, they should be able to recognize that they have made a mistake with place value. Common Mistakes – Incorrectly counting decimal places and lack of fluency with multiplication facts will cause the majority of errors with this skill. Encourage students to practice their math facts and count decimal places. They can record the number of decimal places in each factor next to that number and circle it to help them remember.
LESSON 5 Multiplying Decimals By Decimals	<ul style="list-style-type: none"> Understanding how to estimate the reasonableness of an answer is huge with multiplying decimals. Students should be able to round to predict an answer and then gauge the reasonableness of their answer. If they multiply 8.5 and 3.4 and get an answer of 2,890 or 289, they should be able to recognize that they have made a mistake with place value. Common Mistakes – Incorrectly counting decimal places and lack of fluency with multiplication facts will cause the majority of errors with this skill.

Talking points are the same since the skills basically are!

Teacher Resources

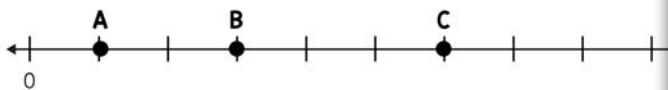
LESSON 3 Subtracting Decimals	<ul style="list-style-type: none"> Common Mistakes – Not lining up decimals or not carrying over when subtracting. Students still do this for some reason so ensure they are lined up correctly. 	LESSON 6 Dividing Decimals	<ul style="list-style-type: none"> Discuss with students when they may need to divide decimals by whole numbers (splitting a lunch bill). Explain to them that dividing with decimals requires the same knowledge as dividing whole numbers, except they
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Name _____ Date _____

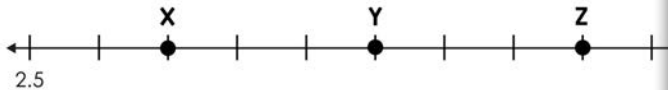
Decimal Sense

Skill : Locate decimals on number lines

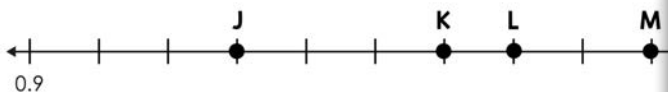
1) Name the decimal represented by each point on the number line.



2) Name the decimal represented by each point on the number line.



3) Which point shows the location of 0.97?



4) Which point shows the location of 4.13?

Name _____ Date _____ **two**

Adding Decimals Warm Up

Skill : Adding multi-digit whole numbers

COMPLETELY EDITABLE

1) $635 + 189$

2) $3,721 + 1,499$

3) $12,755 + 343$

4) $13,477 + 1,499$

Name _____ Date _____

Multiplying Decimals by Whole Numbers Warm Up

Skill : Adding and subtracting decimals

1) $46.8 + 51.77$

2) $182.45 + 12.49$

3) $65.4 - 50.33$

4) $84.74 - 70.8$

one

Name _____ Date _____ **four**

Dividing Decimals by Whole Numbers Warm Up

Skill : Dividing decimals by whole numbers

1) $0.65 \div 5$

2) $4.66 \div 2$

3) $25.38 \div 6$

4) $18.36 \div 3$

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Warm Ups

Adding Decimals Not

Big Idea :

- Add decimals just as you would whole numbers. Pay attention to where the decimal belongs in the sum.

Key Words :

- Decimal
- Place Value
- Sum

Review : Add the whole numbers.

1) $145 + 78$

2) $2,234 + 856$

Adding Decimals: Adding decimals is just like adding whole numbers.

- Line up the _____.
- Fill in empty spaces with a _____.
- _____.

_____ the decimal point into the a

5	0
6	7

$224.8 + 1.2$

➤ Place the decimal in each addend and solve!

2	2	4
+		1

$19.3 + 0.93$

➤ Fill the numbers in

--	--	--	--	--	--

Estimating Products

Big Idea :

- You can estimate the products of decimals using the same methods used to estimate the products of whole numbers.

Key Words :

- Compatible Number
- Factor
- Product

Rounding vs. Compatible Numbers :

Rounding	Compatible Numbers
When rounding you take each number to a specific place value.	When using compatible numbers, you use numbers that are close to the actual numbers and easy for you to multiply.
<ul style="list-style-type: none"> Estimate the product of 124×0.67 by rounding. 	<ul style="list-style-type: none"> Estimate the product of 124×0.67 using compatible numbers.

➤ In the example above, which estimate product do you think is closest to the actual product? Explain.

ers.

04×78

4) 24.2×400

Multiplying Decim

Big Idea :

- To multiply by a decimal you follow the same steps as multiplying by a whole number.

Review :

- Complete the table to show what happens to the decimal when you multiply a number by a power of ten.
- The number of places the decimal is moved is equal to the number of _____ in the power of ten.

Multiply by...

1	_____ places
10	_____ places
100	_____ places
1,000	_____ places

Try it - move the decimal :

1) 0.6×10

2) $4.85 \times 1,000$

3) 1×100

4) $526.3 \times 10,000$

Multiplying Whole

- Multiply as you would with whole numbers.
- Count the number of places the decimal should move to the right.
- Place the decimal _____ the right.

Try it :

1) 16.2×5

2) _____



Dividing Decimals By Whole Numbers

Big Idea :

- To divide a decimal by a whole number you follow the same steps as dividing two whole numbers.

Key Words :

- Dividend
- Quotient
- Divisor

Review :

- Complete the table to show what happens to the decimal when you divide a number by a power of ten.
- The number of places the decimal is moved is equal to the number of _____ in the power of ten.

Divide by...

The decimal moves to the left...

1	_____ places
10	_____ places
100	_____ places
1,000	_____ places

Try it - move the decimal :

1) $60.3 \div 10$

2) $482.9 \div 100$

3) $4,500.45 \div 1,000$

4) $26.3 \div 100$

Dividing Whole Numbers & Decimals:

- Divide as you would with two whole numbers.
- Float the decimal up _____.

Try it :

1) $16.5 \div 5$

2) _____

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Notes

Name _____ Date _____

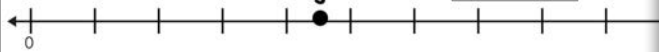
Decimal Sense Review

Naming Decimals:

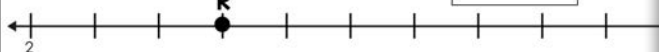
Name the decimal represented by the point on the line.



Name the decimal represented by the point on the line.



Name the decimal represented by the point on the line.



Name the decimal represented by the point on the line.



Name _____ Date _____

Subtracting Decimals

Directions: Estimate the difference by rounding.

1) $0.79 - 0.21$

2) $17.12 -$

3) $25.45 - 11.4$

4) $8.21 - 5.98$

Directions: Align and subtract.

5) $0.63 - 0.38$

6) $34.35 - 15.92$

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Name _____ Date _____

Multiplying Decimals By Decimals Practice

Directions: Use the table to answer the questions. Show your work.

1) How much would 8 avocados cost?

Fruit	Price
Strawberries	\$0.80 per lb
Avocados	\$1.15 each
Blueberries	\$0.95 per lb
Apples	\$2.99 per lb

2) Hope purchases 6.5 pounds of strawberries. How much does she pay?

3) How much would it cost to buy 3.7 lb of blueberries?

Name _____ Date _____

Dividing Decimals by Whole Numbers Applications

Directions: Identify the error and solve correctly.

1)
$$\begin{array}{r} 51.6 \\ 6 \overline{) 30.96} \\ \underline{-30} \\ 9 \\ \underline{-6} \\ 36 \\ \underline{-36} \\ 0 \end{array}$$

2)
$$\begin{array}{r} 1.3 \\ 2 \overline{) 20.6} \\ \underline{-20} \\ 006 \\ \underline{-6} \\ 0 \end{array}$$

Directions: Read each problem carefully.

3) Mariah is making scarves. She has a roll of yarn that is 157.08 feet long. She needs to cut the yarn into 22 equal sections. How

4) Benny has 128.48 ounces of lemonade to pour equally into 8 glasses. How much lemonade will go into each glass?

Multiplying Decimals with Models

One page of cards per student or pair.

0.8

1.25

0.06

0.15

1.05

0.79

Name _____ Date _____

Subtracting Decimals Practice Applications

Directions: Identify the error and solve correctly.

1)
$$\begin{array}{r} 20 \\ \underline{-1.2} \\ 0.8 \end{array}$$

2)
$$\begin{array}{r} 14.2 \\ \underline{-0.55} \\ 12.75 \end{array}$$

Directions: Read each problem carefully.

3) Meghan bought \$1.99 worth of strawberries and paid with a \$10 bill. How much change will she receive?

4) Lily had 4.7 pounds of chocolate at the beginning of the week. By Friday she had 1.95 pounds left. How much chocolate had been eaten during the week?

5) Edwin walks 1.24 miles to Carson walks 1.8 miles. What is the greatest distance? How far did they walk?

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Worksheets

Name _____ Date _____ Score _____

Operations with Decimals

Unit Pre Assessment

1) Compare using $<$, $>$ or $=$.

0.43 ☐ 0.4

1.099 ☐ 1.9

0.8 ☐ 0.108

14.5 ☐ 14.50

2) Complete the pattern:

$7.2 \times 1 =$ _____

$7.2 \times 10 =$ _____

$7.2 \times 100 =$ _____

$7.2 \times 1,000 =$ _____

3) Complete the pattern:

$42.3 \div 1 =$ _____

$42.3 \div 10 =$ _____

$42.3 \div 100 =$ _____

$42.30 \div 1,000 =$ _____

4) Estimate the product : 3.14×9.87

5) Estimate the product : 4.09×12.89

6) Estimate the quotient : $11.9 \div 3$

7) Estimate the quotient : $78.6 \div 19$

8) Solve : $68.23 + 19.7$

9) Solve : $42.86 - 7.52$

Name _____ Date _____ Score _____

Adding & Subtracting Decimals

Adding Decimals : Find the sum. Show your work.

1) $134 + 9.6$

2) $13.82 + 19.41$

Subtracting Decimals : Find the difference. Show your work.

4) $20.5 - 11.23$

5) $13.2 - 9.5$

6) $17 - 6.4$

Decimal Applications : Read each problem carefully and solve. Show your work.

7) Melissa runs 9.2 miles on Friday and 7.75 miles on Saturday. How many more miles did she run on Friday?

8) Patrick bought 2.3 pounds of grapes, 1.75 pounds of strawberries and 4.65 pounds of apples. How many pounds of fruit did he buy altogether?

COMPLETELY EDITABLE

Name _____ Date _____ Score _____

Multiplying & Dividing Decimals Quiz

Multiplying Decimals : Find the product. Show your work.

1) 1.3×8

2) 15×2.5

3) 6.5×4.3

Dividing Decimals : Find the quotient. Show your work.

4) $1.8 \div 6$

5) $25.8 \div 6$

6) $35.7 \div 7$

DECIMAL OPERATIONS

END OF UNIT TASK

Objective : Order a meal for a family of four. Calculate the total including tax, tip and a discount.

Benny's Big Burger Shop {Menu}

Appetizers		Kids Meals		Big Burgers		Desserts	
French Fries	\$3.25	Lil Hamburger	\$3.99	Big Hamburger	\$6.99	Pie Slice	\$2.85
	\$4.30	Lil Cheeseburger	\$4.29	Big Cheeseburger	\$6.29	Ice Cream Scoop	\$1.99
	\$3.75	Lil Veggie Burger	\$4.99	Big Veggie Burger	\$7.99	Ice Cream Sundae	\$4.65

Name _____ Date _____ Score _____

Decimal Operations Assessment

Ordering Decimals : Put each group of numbers in order from least to greatest.

1) 0.45, 0.4, 0.504, 0.405, 0.5

2) 3.1, 3.01, 3.13, 3.3, 3.103

Adding Decimals : Find the sum. Show your work.

3) $14.5 + 180.76$

4) $405.72 + 1.44$

Subtracting Decimals : Find the difference. Show your work.

5) $52 - 18.4$

6) $104.5 - 98.7$

Multiplying Decimals : Find the product. Show your work.

7) 15.2×0.35

8) 8.45×1.2

Decimal Operations Assessment

Directions : Read each problem carefully. Show your work.

11) Strawberries cost \$1.98 per pound. How much would 0.75 pounds of strawberries cost?

12) Morgan purchased \$11.26 worth of groceries. She paid the cashier with a \$20 bill. How much change will she receive?

13) If the product of 20 and 74 is 1,480, what is the product of 20 and 0.74?

a) 0.148

b) 1.48

c) 14.8

d) 148

e) 14,800

14) Joanne paid \$44.27 for 19 gallons of gas. Which is the best estimate of how much Joanne paid for gas altogether?

a) 660

b) 66

c) 6.6

d) 6.60

15) Carl ran a mile in 9.08 minutes. How much faster did he run than Carl?

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Assessments

Dividing Decimals : Find the quotient. Show your work.

9) $1.2 \div 3$

10) $489.6 \div 32$

altogether?

working a full 5 day week?

a) 150

b) 160

Unit
THREE

• $1\frac{1}{4} + 3\frac{5}{6} = 1\frac{1}{6}$

• $1\frac{1}{4} = \frac{5}{4}$

• $3\frac{5}{6} = \frac{19}{6}$

• $\frac{5}{4} + \frac{19}{6} = \frac{13}{12}$

• $\frac{13}{12} = 1\frac{1}{6}$

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Unit
THREE

Decimal Operations

5th Grade Math

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STUDENT TRACK

STUDENT TRACKING

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Tracking Sheets & Binder Labels

Operations with Decimals

5th Grade Math

Vocabulary	Objectives
<ul style="list-style-type: none"> Compatible number Decimal Difference Dividend Divisor Factor Place value Product Quotient Sum 	<ul style="list-style-type: none"> Order decimals through the thousandths place. Write decimals given their position on a number line. Write decimals given models. Fluently add, subtract and multiply multi-digit decimals. Fluently divide decimals by whole numbers. Represent addition, subtraction, multiplication and division of decimals with concrete models and drawings. Explain patterns in products and quotients based on the placement of the decimal point.
	Standards
	<ul style="list-style-type: none"> 5.NBT.2 5.NBT.3b 5.NBT.4 5.NBT.7

Weekly Warm Up Sheet

COMPLETELY EDITABLE

Operations with Decimals Lesson Plan

Standard(s): _____ Date(s): _____

Student Materials:

- ☐ Calculator ☐ Scissors ☐ Compass ☐ _____
☐ Colored pencils ☐ Glue ☐ Graph paper ☐ _____
☐ Ruler ☐ Protractor ☐ Dry erase ☐ _____

Lesson Progression:

Operations with Decimals VOCABULARY

term	definition
Compatible Number	
Decimal	
Difference	
Dividend	
Divisor	
Factor	
Place Value	
Product	

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Planning Pages