# learning focus:
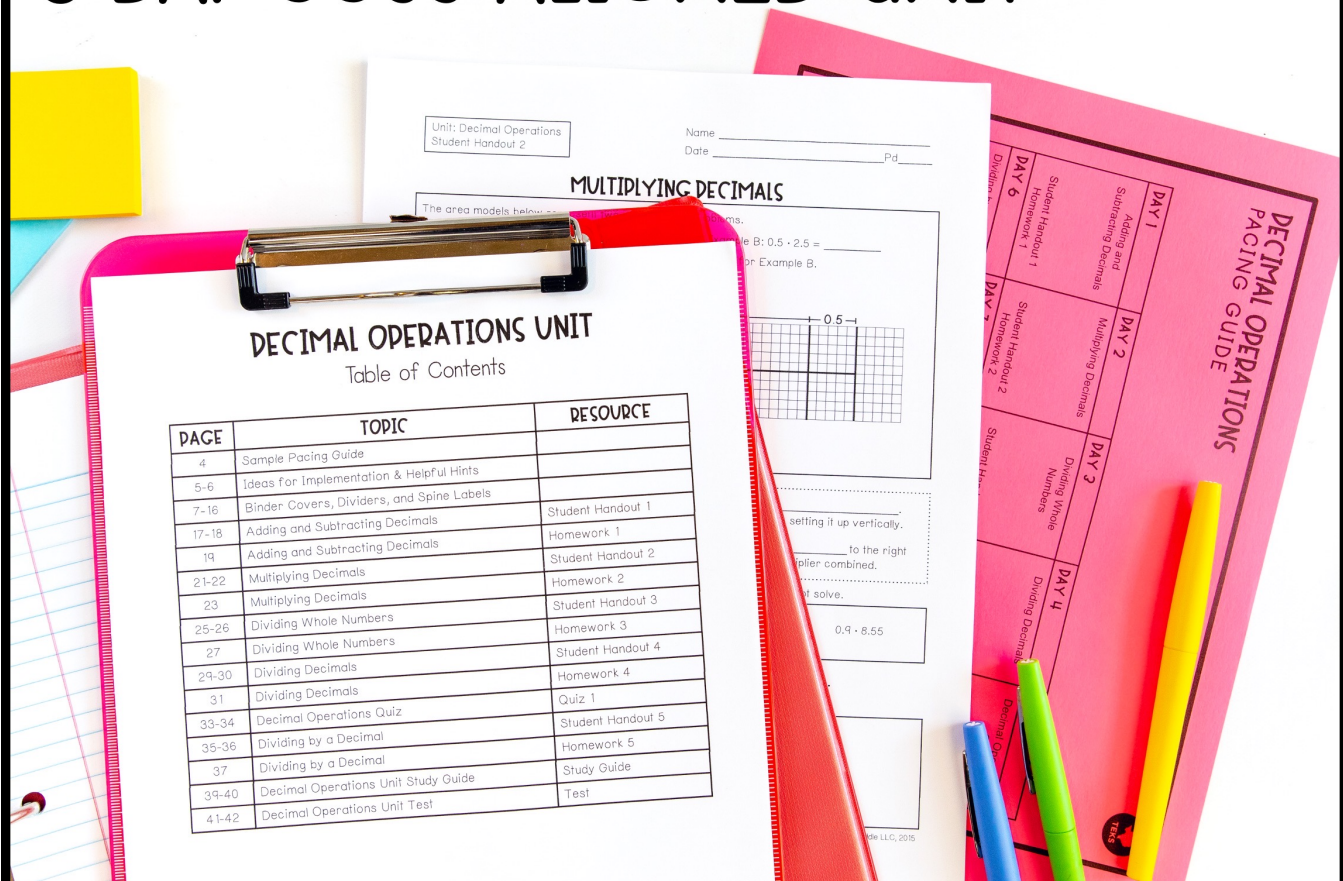
✓ add, subtract, multiply and divide decimals

✓ model and use standard algorithms

✓ real-world application of decimal operations

# DECIMAL OPERATIONS UNIT
## 8 DAY CCSS-ALIGNED UNIT

**6th GRADE**

Unit: Decimal Operations
Student Handout 2

Name _____
Date _____ Pd ____

## MULTIPLYING DECIMALS

The area models below

Example B: 0.5 · 2.5 = _____

for Example B.

0.5

setting it up vertically.

to the right
plier combined.

of solve.

0.9 · 8.55

## DECIMAL OPERATIONS UNIT
### Table of Contents

## DECIMAL OPERATIONS PACING GUIDE

| DAY 1 | DAY 2 | DAY 3 | DAY 4 |
|-------|-------|-------|-------|
| Adding and Subtracting Decimals | Multiplying Decimals | Dividing Whole Numbers | Dividing Decimals |
| Student Handout 1, Homework 1 | Student Handout 2, Homework 2 | Student Ha... | |

| DAY 6 | | | |
| Dividing | | | |

A MANEUVERING THE MIDDLE ® RESOURCE

# DECIMAL OPERATIONS

6th GRADE

an 8 day CCSS-aligned unit
CCSS: 6.NS.2, 6.NS.3

## ready-to-go, scaffolded student materials

## DECIMAL OPERATIONS UNIT
### Table of Contents

# DECIMAL OPERATIONS

6th GRADE

an 8 day CCSS-aligned unit
CCSS: 6.NS.2, 6.NS.3

## student friendly + real-world application

### graphic organizers

Unit: Decimal Operations
Student Handout 3

Name _____
Date _____ Pd _____

#### DIVIDING WHOLE NUMBERS

Mr. Bradford's class brainstormed different symbols and phrases that indicate division. Circle the correct cards below.

"split"  |  460 ÷ 12  |  "quotient"  |  460 × 12

$\frac{582}{16}$  |  "product"  |  "all together"  |  $1\frac{2}{3}$

Label the parts of each division problem

$$30\overline{)510} = 17$$

Use your previous knowledge of division help organize your work.

1. $27\overline{)1134}$  2.

---

Each of the cards on the left has the same solution as one of the cards on the right. Find the matching expressions to complete the sentences below.

A  735 ÷ 21
B  496 ÷ 31
C  638 ÷ 22
D  2691 ÷ 23

F  1344 ÷ 84
G  261 ÷ 9
H  595 ÷ 17

Card A and Car
Card B and Car
Card C and Car
Card D and Car

Practice dividing whole numbers in the

4. In preparation for open house, the c
made 1,675 copies, then how many set

**I KNOW:**

**PLAN AND WORK:**

5. Mr. Jackson hires his neighbor Timo
tells Timothy that he will pay him $270.

**I KNOW:**

**PLAN AND WORK:**

Summarize today's lesson:

---

Unit: Decimal Operations
Homework 3

Name _____
Date _____ Pd _____

#### DIVIDING WHOLE NUMBERS

Match each correct answer to a letter and complete the riddle below.

1. 221 ÷ 17 = _____
2. 1334 ÷ 29 = _____
3. 836 ÷ 38 = _____
4. Betsy's Bakery packages muffins in boxes of one dozen. If Betsy bakes 1,152 muffins on Saturdays, how many boxes are ready to sell?
5. The area of a rectangle is 2,210 square feet. If the length of the rectangle is 85 feet, then what is the width?
6. Eight family members would like to purchase a large gift costing $520. If the cost of the gift is split evenly, how much will each family member contribute?
7. A library has 16 shelves of fiction books. If there are 4,544 fiction books, how many books are on each shelf?
8. A small business celebrates serving 5,110 customers in their first year of business. How many customers did they average each day?
9. Janelle's marathon training program suggests running 396 miles over a period of 22 weeks. What is the average number of miles Janelle will run each week to train for the marathon?

| S: 67 | C: 98 | F: 8 | H: 123 | R: 18 | L: 96 |
| M: 26 | I: 65 | U: 14 | N: 284 | O: 46 | A: 13 |
| Y: 218 | Q: 89 | D: 25 | E: 22 | P: 12 | T: 42 |

**WHAT DO YOU CALL A NUMBER THAT CAN'T SIT STILL?**

___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
1  9  2  1  5  6  7  8  5  3  9  1  4

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## self-checking practice

# DECIMAL OPERATIONS

6th GRADE

an 8 day CCSS-aligned unit
CCSS: 6.NS.2, 6.NS.3

## streamline your planning process with unit overviews

### DECIMAL OPERATIONS
OVERVIEW

CCSS

#### STANDARDS

6.NS.2 Fluently divide multi-digit numbers using the standard algorithm.

6.NS.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.

#### BIG IDEAS

- Numbers can be represente
- Decimals can be used to sol

#### ESSENTIAL QUESTION

- What pattern do you notice
- What pattern do you notice
- How do I know which mathe

✓ key vocabulary

✓ vertical alignment

sample pacing calendar

### DECIMAL OPERATIONS
PACING GUIDE

CCSS

| DAY 1 | DAY 2 | DAY 3 | DAY 4 | DAY 5 |
|---|---|---|---|---|
| Adding and Subtracting Decimals | Multiplying Decimals | Dividing Whole Numbers | Dividing Decimals | Decimal Operations Quiz |
| Student Handout 1 Homework 1 | Student Handout 2 Homework 2 | | | |
| DAY 6 | DAY 7 | | | |
| Dividing by a Decimal | Decimal Operations Study Guide | | | |
| Student Handout 5 Homework 5 | Unit Study Guide | | | |

### DECIMAL OPERATIONS
OVERVIEW

CCSS

| TOPIC | TEACHING TIPS |
|---|---|
| Adding and Subtracting Decimals | • This topic should be a review from fifth grade. Feel free to exclude the lesson or replace it with an activity.<br>• Consider bringing a few envelopes (or boxes) and marking a dollar amount on the front and including a variety of coins inside. Tell students that the value on the outside is what should be in the box. Then, ask students to find the missing amount. Tables or groups can switch boxes and try again. |
| Multiplying Decimals | • Because multiplying decimals is so similar to multiplying whole numbers, there are often small errors regarding the decimal placement. Have students practice checking for reasonableness by rounding to the nearest whole number and determining if their solution makes sense. |
| Dividing Decimals | • A great tip for dividing decimals is to have students use graph paper as their scratch paper. This keeps every number in the appropriate place value as they do long division.<br>• Consider bringing in a dollar and discussing making change, as it pertains to taking a whole and dividing it into smaller pieces. |

teaching ideas

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# DECIMAL OPERATIONS

## an 8 day CCSS-aligned unit
## CCSS: 6.NS.2, 6.NS.3

6th GRADE

## unit study guide + assessments

✓ **quizzes**

✓ **editable unit test**

Unit: Decimal Operations
Quiz

Name _____
Date _____ Pd_____

### QUIZ: DECIMAL OPERATIONS

Answer the questions below. Be sure to show work.

1. Ms. Sloan asked her students to multiply 15.4 by 7.2. In the solution, how many digits will be behind the decimal?

a. 0
b. 1
c. 2
d. 3

Answers
1. _____
2. _____
3. _____

2. Which of the students below correctly

a. Gayle only
b. Ian only
c. Both Gayle and Ian
d. Neither Gayle nor Ian

165.
1

Answer the questions below. Be sure to

3. Oscar is building a fence and purchase 2.91 meters long. How many meters of fe

4. The average mail carrier walks 5.3 kilo walk in a 6-day week?

5. A pitcher of lemonade holds 147 ounce servings are in one pitcher?

Unit: Decimal Operations
Review

Name _____
Date _____ Pd_____

### DECIMAL OPERATIONS UNIT STUDY GUIDE

Solve each of the problems below. These represent the types of questions on your test. Be sure to ask questions if you need more help with a topic.

**I CAN FLUENTLY ADD AND SUBTRACT MULTI-DIGIT DECIMALS.**

| 1. $284.78 + 468.43 =$ _____ | 2. | 3. Michael is purchasing |
|---|---|---|
| 4. $863.35 - 127.69 =$ _____ | 5. | |

**I CAN FLUENTLY MULTIPLY MUL**

| 7. $6.34 \cdot 3.4 =$ _____ | 8. |
|---|---|

SIXTH GRADE CURRICULUM

# DECIMAL OPERATIONS

UNIT ONE: ANSWER KEYS

## answer keys included