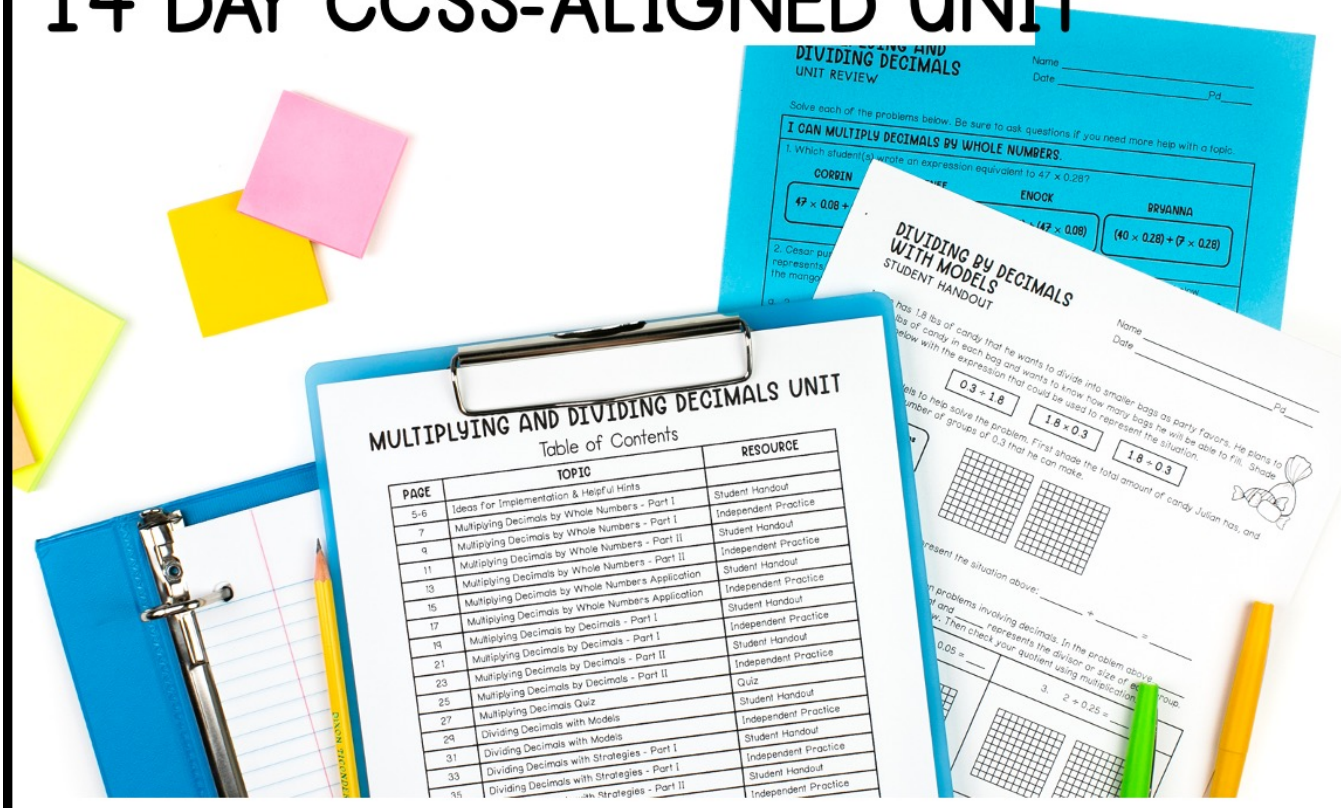
learning focus:

- ✓ multiply decimals to the hundredths by whole numbers using models and strategies
- ✓ multiply and divide decimals by whole numbers using models
- ✓ multiply and divide decimals by decimals using strategies and the standard algorithm

MULTIPLYING AND DIVIDING DECIMALS UNIT

5th GRADE

14 DAY CCSS-ALIGNED UNIT



A MANEUVERING THE MIDDLE ® RESOURCE

MULTIPLYING AND DIVIDING DECIMALS

5th GRADE

a 14 day CCSS-aligned unit
CCSS: 5.NBT.7

ready-to-go, scaffolded student materials

MULTIPLYING AND DIVIDING DECIMALS UNIT

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student friendly + real-world application

scaffolded concepts

Another helpful diagram to model multiplication with decimals is an open number line. Use the number line to answer the question below.

4. A grasshopper jumps 1.2 feet with each jump. How far away is the grasshopper from his starting point after 3 jumps?

ESTIMATE:

MODEL AND SOLVE:

In #5-6, estimate the produc

5. 2.4 × 3

ESTIMATE:

MODEL AND SOLVE:

Apply your understanding of

7. Mrs. Rowe asked her stud

Circle the name of the stude

ELLIOT

8. Lana purchased cookies a equation shows how to find

a. 2 × 70 = 140.00
b. 2 × 0.70 = 1.40
c. 2 × 7 = 14.00
d. 2 × 0.70 = 0.14

MULTIPLYING DECIMALS BY WHOLE NUMBERS – PART I

STUDENT HANDOUT

Name _____

Date _____ Pd_____

The school store sells a variety of erasers for $0.32. On Friday, Shay bought 3 erasers. The expression at the right represents the total amount that Shay spent.

0.32 + 0.32 + 0.32

a. Write another expression that could be used to represent the total Shay spent.

b. Use the picture below to determine the total amount of money Shay spent.

When multiplying a decimal by a whole number, bas process of repeated addition. In #1-3, estimate the sketch a model to solve. The model in question 1 ha

1. 0.8 × 2 ESTIMATE:		MODEL
2. 5 × 0.4 ESTIMATE:		MODEL
3. 0.26 × 3 ESTIMATE:		MODEL

MULTIPLYING DECIMALS BY DECIMALS – PART II

INDEPENDENT PRACTICE

Name _____

Date _____ Pd_____

Solve each problem below. Match your answers in the table to solve the riddle.

1 8.7 × 5.9	5 Ms. Lee used 2.2 yards of fabric to cover a small bulletin board. She then used 3.05 times the amount of fabric to cover a large bulletin board as she did the small bulletin board. How much fabric did she use to cover the large bulletin board?
2 A popsicle mold holds 2.7 ounces of liquid. Lina was able to fill 12.6 popsicle molds with fruit juice. How many ounces of fruit juice did Lina use to fill the popsicle molds?	6 31.8 × 0.4
3 3.8 × 7.12	7 Ernesto used 1.9 packets of sugar in his coffee. Each packet of sugar contains 3.5 grams of sugar. How many grams of sugar did Ernesto use in his coffee?
4 A waffle recipe uses 31.2 grams of baking powder. A pancake recipe uses 1.4 times the amount of baking powder as the waffle recipe. How many grams of baking powder does the pancake recipe use?	8 3.9 × 51.1

E: 43.68	L: 34.02	N: 67.1	B: 199.29	W: 1.272	D: 66.5
T: 6.65	S: 12.72	A: 27.056	C: 19.929	M: 51.33	I: 6.71

WHERE DO MULTIPLICATION PROBLEMS EAT BREAKFAST?

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

self-checking practice

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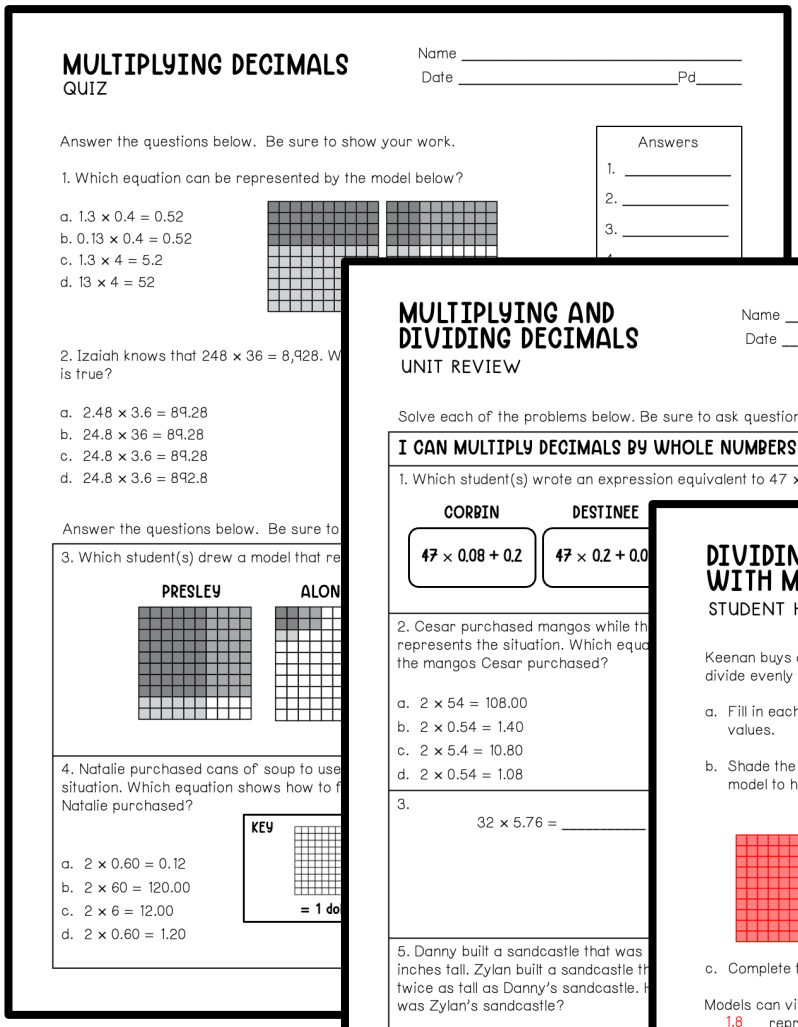
unit study guide + assessments



MULTIPLYING DECIMALS
QUIZ

Name _____
Date _____Pd_____

Answer the questions below. Be sure to show your work.

1. Which equation can be represented by the model below?

a. 1.3 × 0.4 = 0.52
b. 0.13 × 0.4 = 0.52
c. 1.3 × 4 = 5.2
d. 13 × 4 = 52

Answers
1. _____
2. _____
3. _____

2. Izaiah knows that 248 × 36 = 8,928. W
is true?

a. 2.48 × 3.6 = 89.28
b. 24.8 × 36 = 89.28
c. 24.8 × 3.6 = 89.28
d. 24.8 × 3.6 = 892.8

Answer the questions below. Be sure to

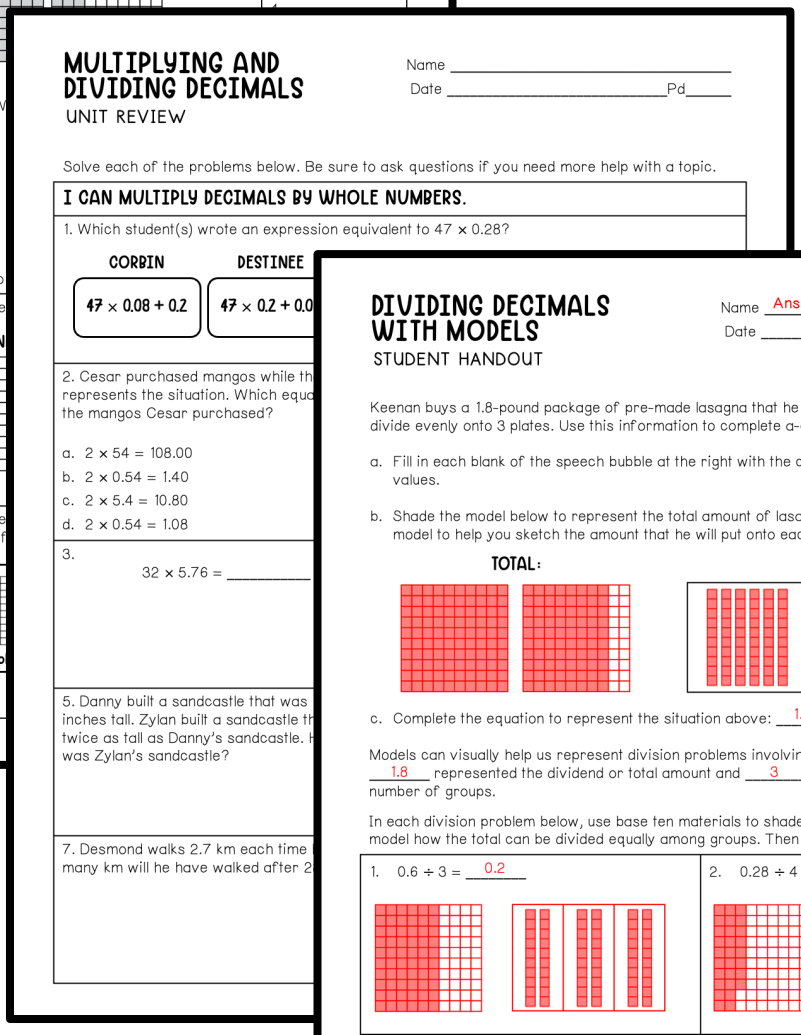
3. Which student(s) drew a model that re

PRESLEY ALON

4. Natalie purchased cans of soup to use
situation. Which equation shows how to f
Natalie purchased?

KEY
= 1 do

a. 2 × 0.60 = 0.12
b. 2 × 60 = 120.00
c. 2 × 6 = 12.00
d. 2 × 0.60 = 1.20



MULTIPLYING AND DIVIDING DECIMALS
UNIT REVIEW

Name _____
Date _____Pd_____

Solve each of the problems below. Be sure to ask questions if you need more help with a topic.

I CAN MULTIPLY DECIMALS BY WHOLE NUMBERS.

1. Which student(s) wrote an expression equivalent to 47 × 0.28?

CORBIN: 47 × 0.08 + 0.2
DESTINEE: 47 × 0.2 + 0.0

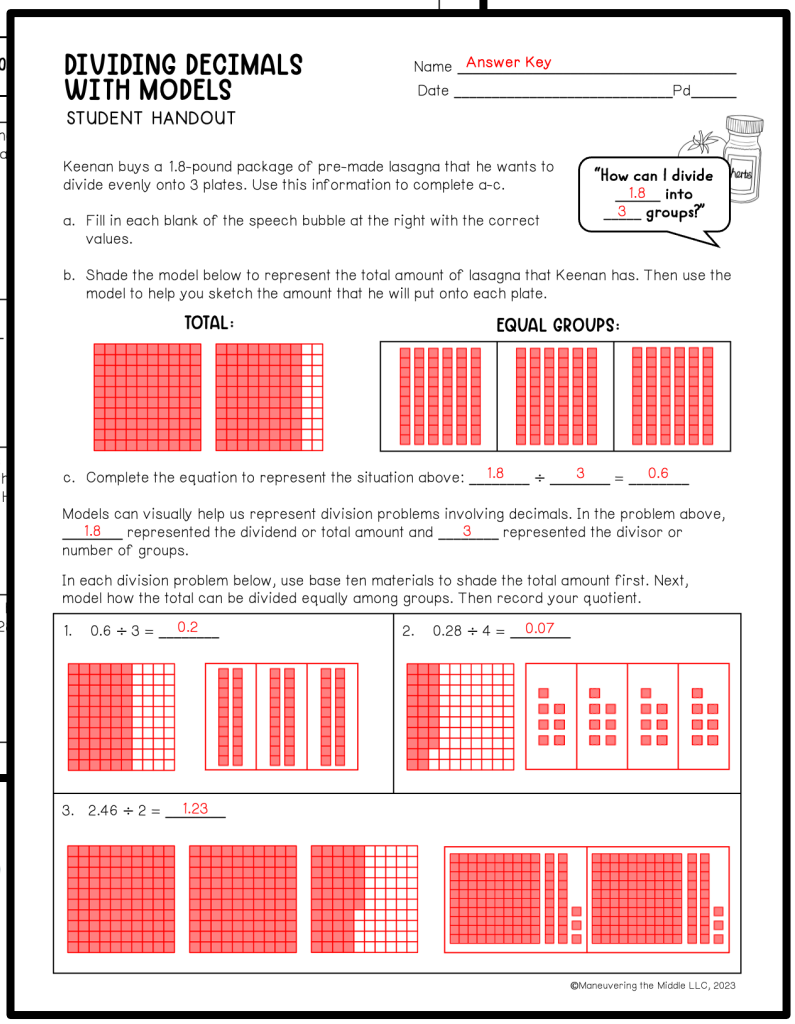
2. Cesar purchased mangos while th
represents the situation. Which equa
the mangos Cesar purchased?

a. 2 × 54 = 108.00
b. 2 × 0.54 = 1.40
c. 2 × 5.4 = 10.80
d. 2 × 0.54 = 1.08

3. 32 × 5.76 = _____

5. Danny built a sandcastle that was
inches tall. Zylan built a sandcastle th
twice as tall as Danny's sandcastle. H
was Zylan's sandcastle?

7. Desmond walks 2.7 km each time
many km will he have walked after 2



DIVIDING DECIMALS WITH MODELS
STUDENT HANDOUT

Name Answer Key
Date _____Pd_____

Keenan buys a 1.8-pound package of pre-made lasagna that he wants to divide evenly onto 3 plates. Use this information to complete a-c.

"How can I divide 1.8 into 3 groups?"

a. Fill in each blank of the speech bubble at the right with the correct values.

b. Shade the model below to represent the total amount of lasagna that Keenan has. Then use the model to help you sketch the amount that he will put onto each plate.

TOTAL: EQUAL GROUPS:

c. Complete the equation to represent the situation above: 1.8 ÷ 3 = 0.6

Models can visually help us represent division problems involving decimals. In the problem above, 1.8 represented the dividend or total amount and 3 represented the divisor or number of groups.

In each division problem below, use base ten materials to shade the total amount first. Next, model how the total can be divided equally among groups. Then record your quotient.

1. 0.6 ÷ 3 = 0.2
2. 0.28 ÷ 4 = 0.07
3. 2.46 ÷ 2 = 1.23

✓ quizzes

✓ editable unit test

answer keys included

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