

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

13 DAY TEKS-ALIGNED UNIT



A MANEUVERING THE MIDDLE® RESOURCE

MULTIPLYING AND DIVIDING DECIMALS



a 13 day TEKS-aligned unit

TEKS: 5.3A, 5.3D, 5.3E, 5.3F, 5.3G

**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 product.

5. 2.4×3

ESTIMATE: _____

MODEL AND SOLVE: _____

Apply your understanding of

7. Mrs. Rowe asked her student to estimate the product of 2.4×3 . Circle the name of the student who gave the best estimate.

ELLIOT

8. Lana purchased cookies and the equation shows how to find the total cost. Circle the correct equation.

a. $2 \times 70 = 140.00$
 b. $2 \times 0.70 = 1.40$
 c. $2 \times 7 = 14.00$
 d. $2 \times 0.70 = 0.14$

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, base ten blocks can be used to model the process of repeated addition. In #1-3, estimate the product and sketch a model to solve. The model in question 1 has been done for you.

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

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 used 3.1 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 raspberry lemonade. How many ounces of raspberry lemonade did Lina use to fill the popsicle molds?	6	31.8×0.4
3	3.8×7.1	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: 68.2	B: 199.29	W: 1.272	D: 66.5
T: 6.65	S: 12.72	A: 26.98	C: 19.929	M: 51.33	I: 6.82

WHERE DO MULTIPLICATION PROBLEMS EAT BREAKFAST?

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

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self-checking practice

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unit study guide + assessments

✓ quizzes

✓ editable unit test

DIVIDING WITH FRACTIONS QUIZ

Name _____
Date _____ Pd _____

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

1. Find the quotient. $16 \div \frac{1}{8} =$ _____

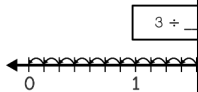
Answers
1. _____
2. _____
3. _____

2. What is the quotient of $\frac{1}{11} \div 13$?

a. 143

b. $\frac{1}{143}$

3. Fill in the missing value in the expression

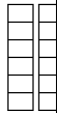


Answer the questions below. Be sure to

4. A chef has a piece of pasta dough that is 1 inch wide. He cuts it into pieces that are each $\frac{1}{5}$ of an inch wide to make fettuccini noodles. How many fettuccini noodles can the chef make from one piece of pasta dough?

- a. 20
- b. 200
- c. 45
- d. 800

6. Two students drew models to represent a situation?



- a. Mel only
- b. Rodrigo only
- c. Both Mel and Rodrigo
- d. Neither Mel nor Rodrigo

MULTIPLYING AND DIVIDING FRACTIONS 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 FRACTIONS AND WHOLE NUMBERS.

1.

$$5 \times \frac{2}{4} =$$

2.

$$\frac{2}{3} \times 6 =$$

3. What is $\frac{3}{11}$ of 5?

4. Use the model to fill in the blank to complete the expression, and then find the product.

$$\square \times \frac{1}{5} =$$



6. Chance spends $\frac{5}{6}$ of an hour each day practicing after 6 days?

7. Mrs. Patterson had several family members. The model below represents how much cereal remaining in the boxes.

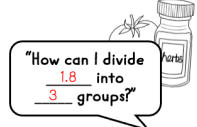
- a. Write an expression to represent the cereal remaining in the boxes.
- b. Determine the solution.

DIVIDING DECIMALS WITH MODELS STUDENT HANDOUT

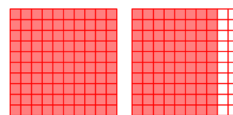
Name Answer Key
Date _____ Pd _____

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.

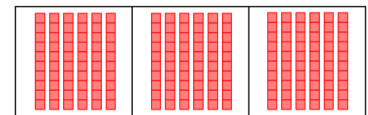
- a. Fill in each blank of the speech bubble at the right with the correct values.
- b. Shade the model below to represent the total amount of lasagna that Keenan has. Then use the model to help you sketch the amount that he will put onto each plate.



TOTAL:



EQUAL GROUPS:

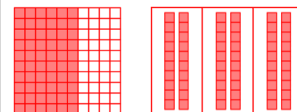


c. Complete the equation to represent the situation above: $1.8 \div 3 = 0.6$

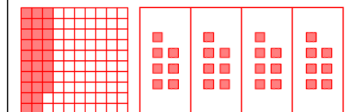
Models can visually help us represent division problems involving decimals. In the problem above, 1.8 represented the dividend or total amount and 3 represented the divisor or number of groups.

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.

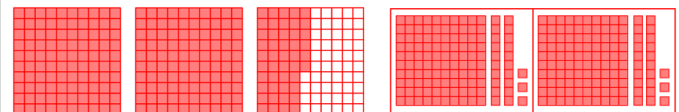
1. $0.6 \div 3 =$ 0.2



2. $0.28 \div 4 =$ 0.07



3. $2.46 \div 2 =$ 1.23



answer keys included

