مراجعة نهائية وفق الهيكل الوزاري الجديد منهج ريفيل

تم تحميل هذا الملف من موقع المناهج الإماراتية	
موقع المناهج ⇦ المناهج الإماراتية ⇦ الصف الخامس ⇦ رياضيات ⇦ الفصل الأول ⇦ ملفات متنوعة ⇦ الملف	
تاريخ إضافة الملف على موقع المناهج: 2025-11-21 11:10:54	
ملفات ا كتب للمعلم ا كتب للطالب ا اختبارات الكترونية ا اختبارات ا حلول ا عروض بوربوينت ا أوراق عمل منهج انجليزي ا ملخصات وتقارير ا مذكرات وبنوك ا الامتحان النهائي ا للمدرس	المزيد من مادة رياضيات:
إعداد: Gamal Sara	

التواصل الاجتماعي بحسب الصف الخامس					
صفحة المناهج الإماراتية على فيسبوك					
المواد على تلغرام	التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات	

المزيد من الملفات بحسب الصف الخامس والمادة رياضيات في الفصل الأول	
1	حل اختبار تجريبي Exam Mock وفق الهيكل الوزاري الجديد منهج ريفيل
2	اختبار تجريبي Exam Mock وفق الهيكل الوزاري الجديد منهج ريفيل
3	حل كراسة تدريبية مراجعة وفق الهيكل الوزاري الجديد منهج بريدج
4	أسئلة اختبار تجريبي وفق الهيكل الوزاري القسم الورقي منهج بريدج
5	تجميعة صفحات الكتاب وفق الهيكل الوزاري الجديد منهج بريدج

الإمارات العربية المتحدة
وزارة التربية والتعليم

Welcome to 5th Grade General

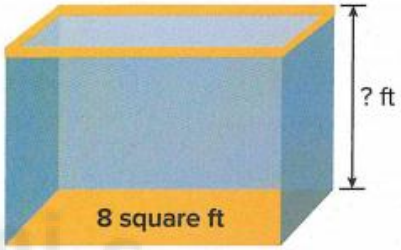
EOT1-2025- COVERAGE REVEAL

Part 1	Type Of Questions	FRQ

Q1	Solve Problems Involving Volume	Learn+Work Together & (1-4)	Page 52 &53

Learn

A fish tank has a volume of 24 cubic feet.
How can you determine the height of the fish tank?



Math is... Quantities

How can you describe the relationship between the given quantities?

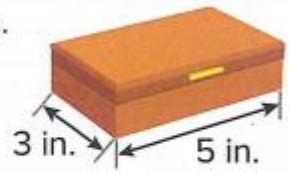
You can use a volume formula to solve problems.

The volume of the tank is 24 cubic feet. The base is 8 square feet. $V = B \times h$ $24 = 8 \times h$	To solve the equation, write a related division equation. $24 = 8 \times h$ $24 \div 8 = h$ $24 \div 8 = 3$ The fish tank has a height of 3 feet.

When solving problems involving volume, you can use the given information to help you determine which volume formula to use.

Work Together

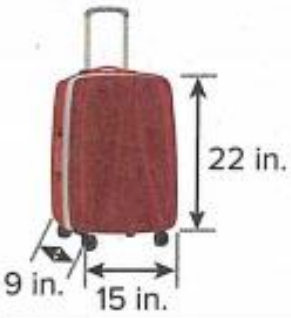
A jewelry box has a volume of 30 cubic inches.
What is the height of the jewelry box?
Show your work.



1. Lillian wants to buy the suitcase with the greater volume. Which suitcase should she buy? Explain.

Suitcase A

Suitcase B



2. A cargo container has a volume of 108 cubic meters, a height of 3 meters, and a width of 2 meters. How long is the cargo container? Show your work.

3. The volume of this rabbit hutch is 36 cubic feet.
What is the width? Show your work.

4. The base of a rectangular prism is a square with side lengths equal to 5 centimeters. The volume of the rectangular prism is 100 cubic centimeters. What is the prism's height? Explain.

Q2	a) Read and write decimals to thousandths using standard form, expanded form, and word form	(1-12)	Page73

What is the word form of the decimal?

1. 8.2
2. 8.02
3. 0.82
4. 0.082

What is the standard form of the decimal?

5. $0.9 + 0.03 + 0.007$
6. $20 + 0.7 + 0.08 + 0.006$
7. $5 + 0.01 + 0.009$
8. $7 + \frac{4}{10} + \frac{5}{1{,}000}$

What is each decimal in standard form?
What is each decimal in expanded form?

9. ninety-three and six thousandths
10. three and eight hundred forty-six thousandths
11. two hundred twelve and fifteen thousandths
12. seven hundred fifty-one thousandths

Q2	b) Compare two decimals to the thousandths place using place value	Learn +Work Together+(1-9)	Page76&77

Learn

Which bag weighs more?

3.281 kg 3.095 kg

Compare the digits in each place starting with the greatest place-value position.

ones	tenths	hundredths	thousandths
3	2	8	1
3	0	9	5

Both numbers have 3 ones.

2 tenths > 0 tenths

Math is... Thinking

Why was it not necessary to compare the hundredths place?

3.281 > 3.095. So, the purple bag weighs more than the red bag.

You can compare decimals the same way you compare multi-digit numbers.

Work Together

Compare the weights of these bags.

ones	tenths	hundredths	thousandths
3	2	8	1
3	9		

3.281 ◯ 3.9

3.281 kg 3.9 kg

Write >, <, or = in each ◯ to make a true comparison. You can use a place-value chart to help.

1. 7.790 ◯ 8.7
2. 1.021 ◯ 1.095
3. 6.55 ◯ 5.66
4. 9.9 ◯ 0.99
5. 3.41 ◯ 3.41
6. 2.563 ◯ 2.573

For exercises 7–9, use the cost of each school supply.

7. Do the pencils or the highlighters cost more?

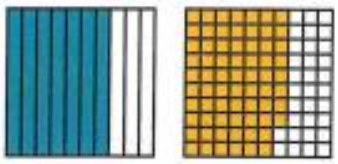
8. Write a comparison statement for the cost of the pens and the pencils.

9. Which school supply is the most expensive? Which school supply is the least expensive? Explain how you know.

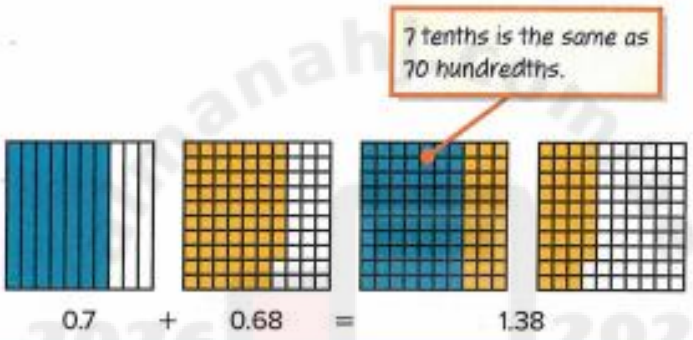
Q3	a) Explain how to use various strategies to add decimals	Learn +Work Together+(1-8)	Page 104 & 105

Learn

How can you determine the sum of 0.7 + 0.68?



You can use decimal grids to help you determine the sum.



Sometimes you need to represent tenths as hundredths to help solve addition equations involving decimals.

Math is... Structure

How is adding decimals similar to adding whole numbers?

Work Together

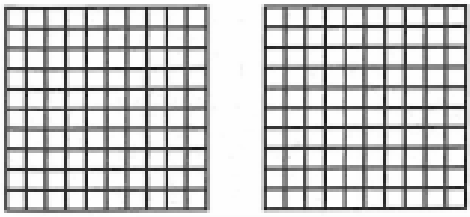
What is the total weight of the chocolate bits and raisins? Use a decimal grid to solve.

Ingredient	Weight (lb)
Chocolate bits	0.6
Raisins	0.59

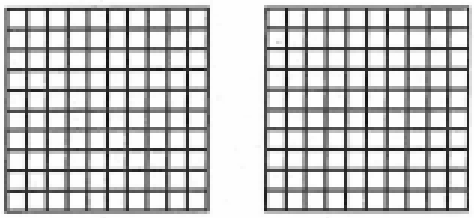
Q3	a) Explain how to use various strategies to add decimals	Learn +Work Together+(1-8)	Page 104 & 105

What is the sum? Use the decimal grids to solve.

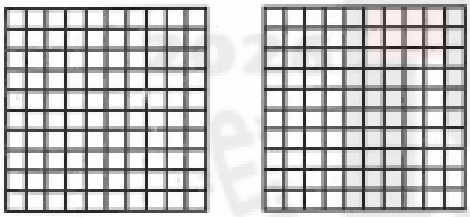
1. $0.9 + 0.02 =$ _____



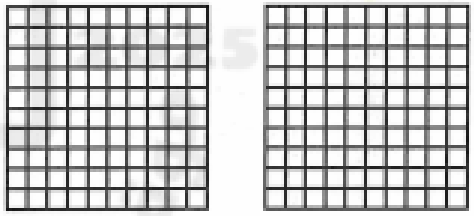
2. $0.14 + 0.5 =$ _____



3. $0.45 + 0.4 =$ _____



4. $0.6 + 0.09 =$ _____



What is the sum? Use decimal grids to solve.

5. $0.7 + 0.18 =$ _____

6. $0.86 + 0.5 =$ _____

7. $0.44 + 0.6 =$ _____

8. $0.1 + 0.89 =$ _____

Q3	b) Represent subtraction of decimals	Learn+Work Together& (1-7)	Page 112 & 113

Learn

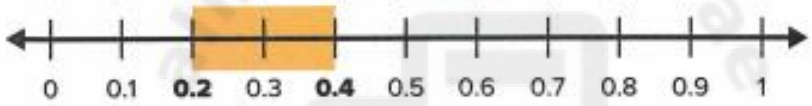
The table shows the decimals represented by different colors on a decimal grid.

How can you determine how much more is shaded red than green? Yellow than purple?

Color	Decimal
Red	0.4
Green	0.2
Yellow	0.36
Purple	0.04

Use a number line to find how much more is shaded red than green.

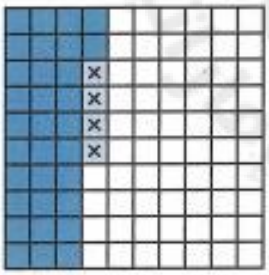
$0.4 - 0.2 = r$



There is 0.2 more shaded red than green.

Use a decimal grid to find how much more is shaded yellow than purple.

$0.36 - 0.04 = y$



Math is... Precision

How is each quantity shown on the decimal grid?

There is 0.32 more shaded yellow than purple.

You can use a number line or decimal grid to subtract decimals.

Work Together

How much greater is the mass of an emu egg than a chicken egg? Explain.

Chicken egg
0.06 kg

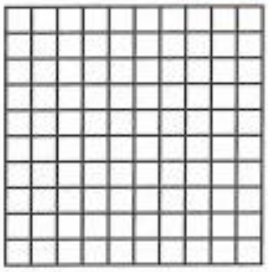
Emu egg
0.62 kg

Q3	b) Represent subtraction of decimals	Learn+Work Together& (1-7)	Page 112 & 113

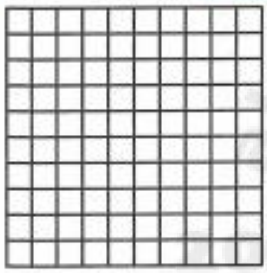
What is the difference? Use the decimal grid to solve.

1. $0.7 - 0.1 =$ _____

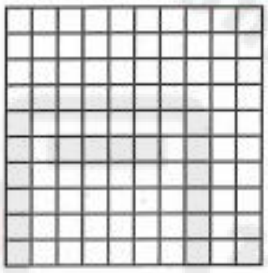
2. $0.09 - 0.02 =$ _____



3. $0.54 - 0.38 =$ _____



4. $0.25 - 0.11 =$ _____

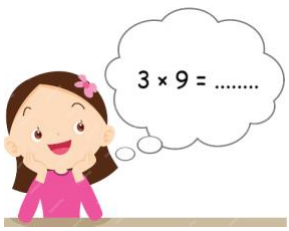


What is the difference? Use a number line to solve.

5. $0.7 - 0.2 =$ _____

6. $0.6 - 0.4 =$ _____

7. Malik has $0.85. He bought a pencil for $0.50. Does he have enough money left to buy a folder for $0.30? Explain.



Q4	Use an area model and partial products to multiply multi-digit whole numbers	Learn+Work Together (1-8)	Page148 & 149

Learn

How can you determine the area of the youth soccer field?

You can use an area model to solve 72 × 114 = A.

Decompose the factors by place value.

	100	+ 10	+ 4
70			
+ 2			

Determine partial products.

	100	+ 10	+ 4
70	7,000	700	280
+ 2	200	20	8

Math is... Modeling

How does an area model help you understand multiplication?

Add the partial products to determine the product.

7,000 + 700 + 280 + 200 + 20 + 8 = 8,208

The area of the soccer field is 8,208 square feet.

You can use area models to multiply multi-digit factors.

Work Together

Use an area model and partial products to determine the product of 304 × 68.

Q4	Use an area model and partial products to multiply multi-digit whole numbers	Learn+Work Together (1-8)	Page148 & 149

Complete the area model. Then solve to find the product.

1.

	100	+ 50	+ 4
30	3,000		
+ 6	600		

2.

	400	+ 20	+ 1
50	20,000		50
+ 2			

What is the product? Use area models to solve.

3. $15 \times 24 =$ _____

	24
15	

4. $28 \times 132 =$ _____

	132
28	

5. $33 \times 78 =$ _____

6. $72 \times 225 =$ _____

Write the multiplication equation based on the area model. Then solve to find the product.

7.

	200	+ 10	+ 8
20			
+ 8			

8.

	400	+ 10	+ 6
60			
+ 3			

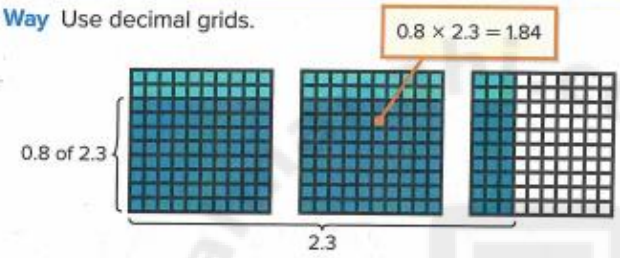
Q5	a) Understand a variety of strategies to solve multiplication equations involving decimals	Learn +Work Together+(1-7)	Page 196 & 197

Learn

Amy rides her bike 2.3 miles to school each day. Jason rides his bike 0.8 of that distance.

How far does Jason ride his bike to school each day?

One Way Use decimal grids.



Jason rides his bike 1.84 miles to school each day.

Another Way Use partial products.

$0.8 \times 2.3 = 0.8 \times (2 + 0.3)$ — Decompose 2.3 by place value.

$= 0.8 \times 2 + 0.8 \times 0.3$

$= 1.6 + 0.24$ — Add partial products.

$= 1.84$

Jason rides his bike 1.84 miles to school each day.

Math is... Exploring

Why is it useful to know more than one strategy to solve a problem?

You can use any strategy to multiply decimals. Look at the factors to determine the most efficient strategy.

Work Together

An area model can be used to solve 3.6×2.5.

What other strategy can you use to solve this problem?

	2	+	0.5
3	$3 \times 2 = 6$		$3 \times 0.5 = 1.5$
+			
0.6	$0.6 \times 2 = 1.2$		$0.6 \times 0.5 = 0.30$

Q5	a) Understand a variety of strategies to solve multiplication equations involving decimals	Learn +Work Together+(1-7)	Page 196 & 197

What is the product? Explain the strategy you used to solve.

1. $2.9 \times 0.7 = d$

2. $5.6 \times 3.2 = b$

3. Each bottle holds the same amount. How much water can these bottles hold?

4. Rebecca cut these ribbons to the same length. How much ribbon did Rebecca use in all?

5. Experts recommend that people have 4.7 grams of potassium per day. Last week Marcus averaged 0.9 times as much potassium as the recommendation. How much potassium did Marcus average each day last week?

6. A pitcher has a capacity of 3.9 liters. A cooler has a capacity 9.2 times greater. What is the capacity of the cooler?

Solve. Explain the strategy used to solve.

7. Kara has a bag of apples. Each apple weighs 0.4 pound on average. There are 17 apples in her bag. What is the total weight of her apples?

Q5	b) Record partial quotients using a strategy	Learn +Work Together+(1-5)	Page 224 & 225

Learn

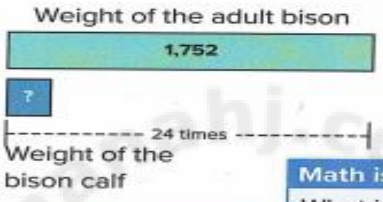
An adult bison weighs 1,752 pounds, which is 24 times the weight of a bison calf.

How much does the bison calf weigh?

You can use partial quotients to solve division equations.

A bar diagram can represent the problem.

$1{,}752 \div 24 = l$.



Math is... Connections

What is another way to show multiplicative comparison?

Use partial quotients to solve.

24) 1,752		
−1,200	50	
552		
−480	20	
72		
−72	3	
0	73	

$1{,}752 \div 24 = 73$

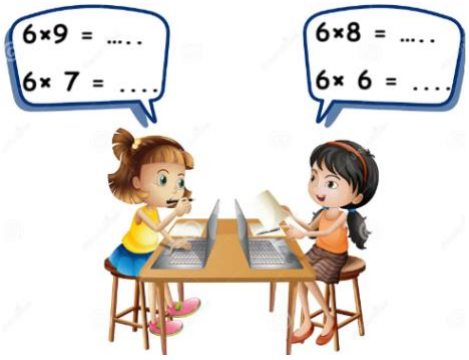
The bison calf weighs 73 pounds.

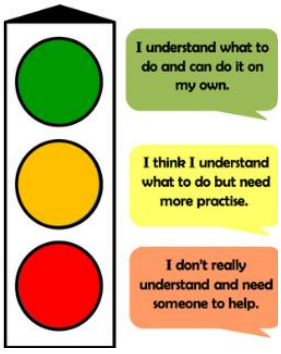
Work Together

What is the quotient of $2{,}356 \div 38$? Use the partial quotients strategy to help you solve the problem.

38	
50 × 38 = 1,900	50
10 × 38 = 380	10
2 × 38 = 76	2
	62

38) 2,356	
− ☐	☐
☐	
− ☐	☐
☐	
− ☐	☐
0	☐





Q5	b) Record partial quotients using a strategy	Learn +Work Together+(1-5)	Page 224 & 225

What is the quotient? Use partial quotients to solve.

1. 819 ÷ 39 = ____

2. 988 ÷ 26 = ____

3. 1,215 ÷ 27 = ____

4. 3,432 ÷ 66 = ____

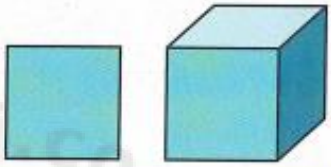
5. **STEM Connection** An astronomer is studying two comets. Comet A has an orbit that is 187 years. Comet A has an orbit that is 17 times as long as the Comet B. How long is the orbit of the Comet B?

Pat 2	Type Of Questions	MCQ	

Q6	Describe volume as an attribute of solid figures	Learn +Work Together+(1-7)	Page34& 35

Learn

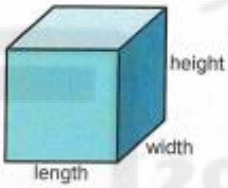
How are these figures the same?
How are they different?



This figure has two dimensions.

Each dimension is a measureable edge length.

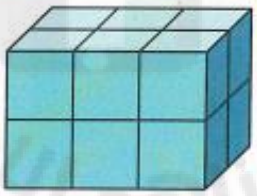
This figure has three dimensions.



Each dimension is a measureable edge length.

The space occupied by a 3-dimensional figure is called **volume**.

You can pack **rectangular prisms** using **unit cubes** with no gaps or overlaps to establish volume.



A unit cube has edge lengths of 1 unit.

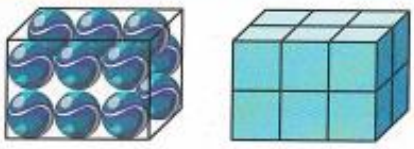
Math is... Precision

Does an empty box have volume? Does a filled box have volume? Explain why or why not.

Work Together

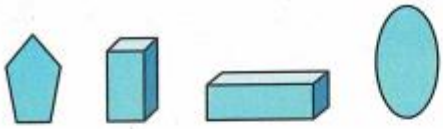
One student used marbles to pack a rectangular prism. Another student used unit cubes.

What do you notice about these strategies?



Q6	Describe volume as an attribute of solid figures	Learn +Work Together+(1-7)	Page34& 35

1. Which of these figures have volume? Justify your reasoning.



For the situation, would you measure the *length*, *area*, or *volume*? Explain.

2. the amount of soil needed to fill a flower pot

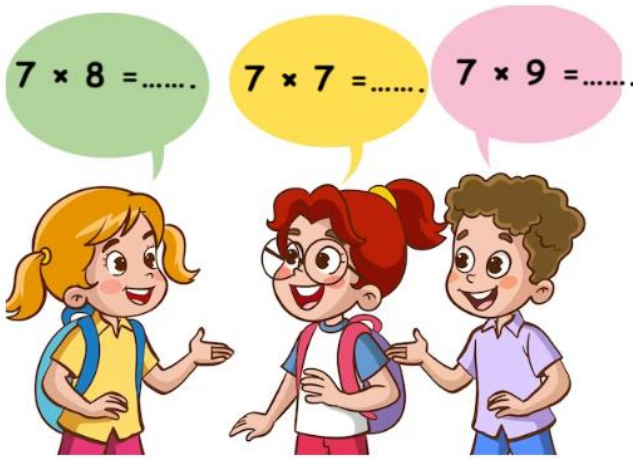
3. the distance of a bike ride

4. the amount of wall space covered by a poster

5. the amount of concrete needed to fill a patio

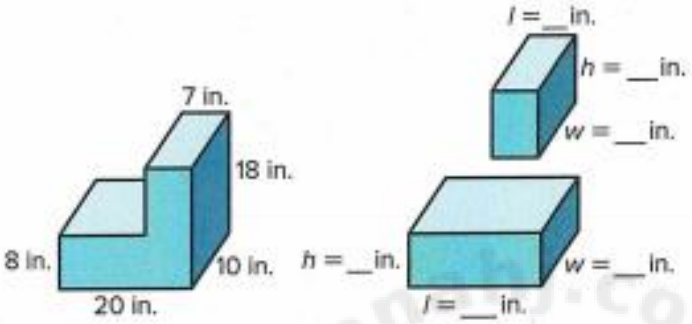
6. the space inside a moving truck

7. the distance around a building

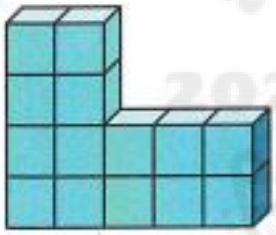


Q7	Find the volume of composite figures	(1-5)	Page 49

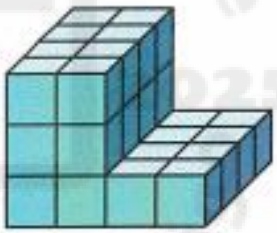
1. Label the unknown dimensions of the decomposed figure and then find the volume of the composite solid figure.



What is the volume of the figure?

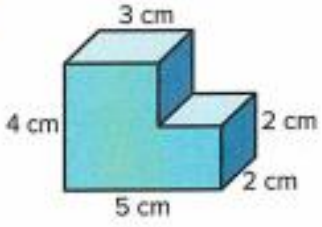
2. 

$V =$ _____ cubic units

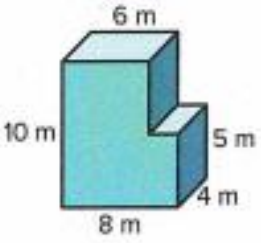
3. 

$V =$ _____ cubic units

Draw line(s) to show how you decomposed the figure.
What is the volume of the figure?

4. 

$V =$ _____

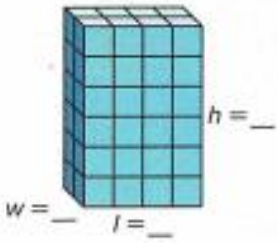
5. 

$V =$ _____

Q8	Find the volume of rectangular prisms using formulas	(1-7) & 11, 12	Page 43&57

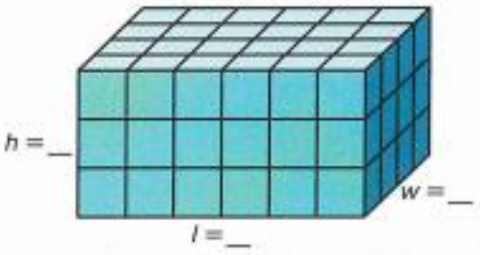
Label the dimensions and then determine the volume of the figure.

1.



$V =$ _____ cubic units

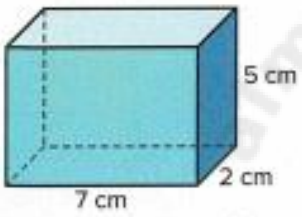
2.



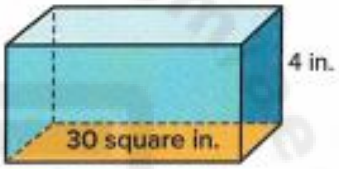
$V =$ _____ cubic units

What is the volume of the figure? Tell which volume formula you used and why.

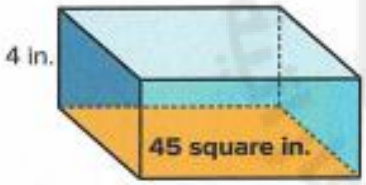
3.



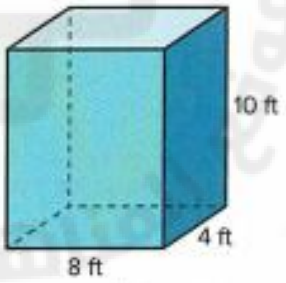
4.



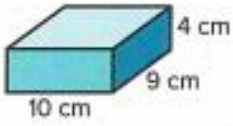
5.



6.



7. Explain how the Associative Property can be used to mentally find the volume of this figure.



11. The volume of a rectangular prism is 48 cubic inches. Which could be the dimensions of the prism? Select all that apply. (Lesson 2–3)

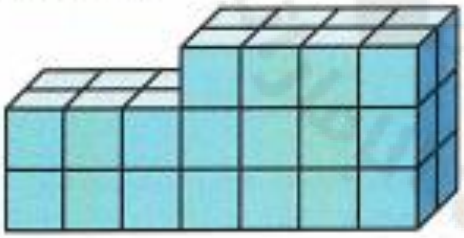
A. length = 24 inches
width = 1 inch
height = 2 inches

B. length = 6 inches
width = 6 inches
height = 4 inches

C. length = 16 inches
width = 16 inches
height = 16 inches

D. length = 12 inches
width = 2 inches
height = 2 inches

12. What is the volume of this figure? (Lesson 2–4)



A. 32 cubic units

B. 38 cubic units

C. 34 cubic units

D. 36 cubic units

Q9	Extend Place Value to Decimals	(1-10)	Page 69 &70

1. Which of the following statements is *true*?
   - A. 0.009 is ten times 0.09
   - B. 0.09 is ten times 0.009
   - C. 0.09 is $\frac{1}{10}$ of 0.009
   - D. 9 is $\frac{1}{10}$ of 0.9

2. Which of the following statements is *true*?
   - A. 0.003 is $\frac{1}{10}$ of 0.03
   - B. 0.03 is $\frac{1}{10}$ of 0.003
   - C. 0.3 is ten times 0.003
   - D. 3 is ten times 0.03

Marcella has $5.00, Niko has $0.50, and Benjamin has $0.05. Use this information to complete each sentence.

3. Benjamin has _____ the money Niko has.
4. Marcella has _____ the money Niko has.

Complete each sentence.

5. $9.00 is _____ $0.90.
6. $0.90 is _____ $9.00.

7. What are two different ways to describe the relationship between the values of each digit 4 in 3.244?

8. What are two different ways to describe the relationship between the values of each digit 2 in 2.257?

9. **Error Analysis** Toby writes the number 23.2 and says that the value of the digit 2 in the tens place is 10 times the value of the digit 2 in the tenths place. How do you respond to him?

10. For which numbers is the value of the digit 8 ten times the value of the digit 8 in the number 4.984?
    - A. 3.814
    - B. 5.820
    - C. 6.982
    - D. 8.492

Q10	Read and write decimals to thousandths using standard form, expanded form, and word form	(1-12)	Page 73

What is the word form of the decimal?

1. 8.2

2. 8.02

3. 0.82

4. 0.082

What is the standard form of the decimal?

5. $0.9 + 0.03 + 0.007$

6. $20 + 0.7 + 0.08 + 0.006$

7. $5 + 0.01 + 0.009$

8. $7 + \frac{4}{10} + \frac{5}{1{,}000}$

What is each decimal in standard form?
What is each decimal in expanded form?

9. ninety-three and six thousandths

10. three and eight hundred forty-six thousandths

11. two hundred twelve and fifteen thousandths

12. seven hundred fifty-one thousandths

Q11	Use rounding strategies to round decimals	(1-11)	Page 83

What is each decimal rounded to the nearest whole number?
You can use a number line or place value.

1. 78.39
2. 4.07
3. 12.7
4. 15.55

What is each decimal rounded to the nearest tenth?
You can use a number line or place value.

5. 42.89
6. 3.65
7. 16.12
8. 98.17

9. Danica rounded a number to the nearest tenth to get 14.7. What number could she have rounded to get this answer?

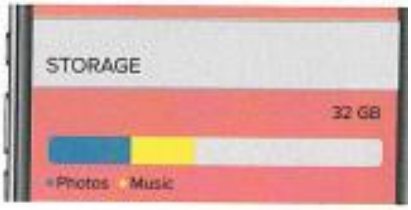
10. Which statements are *true*?
    - A. The decimal 43.678 rounded to the nearest tenth is 43.6.
    - B. The decimal 43.678 rounded to the nearest tenth is 43.7.
    - C. The decimal 43.678 rounded to the nearest hundredth is 43.68.
    - D. The decimal 43.678 rounded to the nearest hundredth is 43.67.

11. The masses of five different dogs are shown. Round each mass to the nearest whole number.

Q12	Estimate Sums and Differences of Decimals	Learn+Work Together	Page 94

Learn

A phone has 32 gigabytes of storage. Photos take up 8.25 gigabytes of this storage, and music takes up 3.62 gigabytes.



How can you determine about how many gigabytes of storage are left?

First, estimate how much storage the photos and music take up.

Use rounding to estimate the sum.

8.25 → 8, 3.62 → 4

$8 + 4 = 12$

The photos and music take up about 12 gigabytes of storage.

Math is... Choosing Tools

What strategies do we know for estimating sums?

Next, use compatible numbers to estimate the difference.

32 → 32, 11.87 → 12

$32 - 12 = 20$

The total storage of photos and music is 11.87 gigabytes. Is this sum reasonable?

The phone has about 20 gigabytes of storage left.

Strategies used to estimate sums and differences of whole numbers can also be used to estimate sums and differences of decimals. Estimating helps assess the reasonableness of calculated solutions.

Work Together

About how much more does Hero weigh than Layla? How did you determine which estimation strategy to use?

Layla

82.98

Hero

86.74

Q12	Estimate Sums and Differences of Decimals	(1-9)	Page 95

What is a reasonable estimate for the sum or difference? Explain the strategy you used.

1. 9.86 + 4.30

   ____ + ____ = ____

2. 43.85 + 56.01

   ____ + ____ = ____

3. 3.92 + 6.14

   ____ + ____ = ____

4. 24.73 + 26.05

   ____ + ____ = ____

5. 8.32 − 5.9

   ____ − ____ = ____

6. 88.4 − 10.96

   ____ − ____ = ____

7. 16.28 − 5.9

   ____ − ____ = ____

8. 5.42 − 1.7

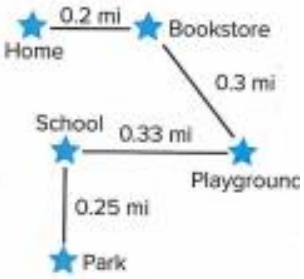
   ____ − ____ = ____

9. **STEM Connection** A baby rabbit weighs 24.8 grams. A veterinarian predicts the rabbit will weigh about 64.5 grams by the next visit. About how much weight will the rabbit gain?

Q13	Represent addition of decimals using decimal grids	Learn + Work Together	Page 100

Learn

Deja drew a map showing the distances she walked.



How can you determine how far Deja walks from home to the bookstore, then to the playground? How can you determine how far she walks from the playground to the school, then to the park?

Deja walks from home to the bookstore, then to the playground.

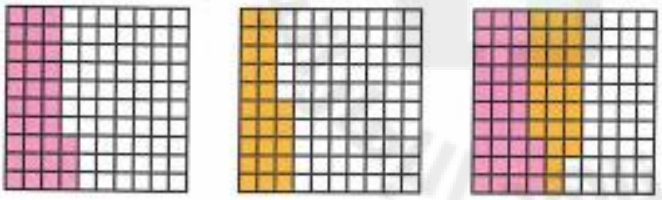
0.2 + 0.3 = 0.5

Decimal grids can help you solve the equation.

Deja walked 0.5 mile.

Deja walks from the playground to school, then to the park.

0.33 + 0.25 = 0.58



Deja walked 0.58 mile.

Math is... Choosing Tools

How are decimal grids helpful in determing the sum of two decimals?

You can use decimal grids to help solve addition equations involving decimals.

Work Together

René bought potatoes and turnips. How much do the potatoes and turnips weigh? Use decimal grids to solve.

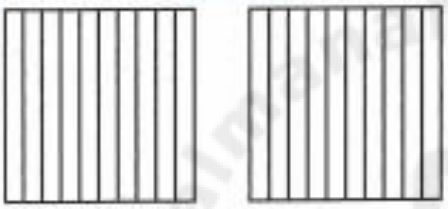
0.9 kg

0.3 kg

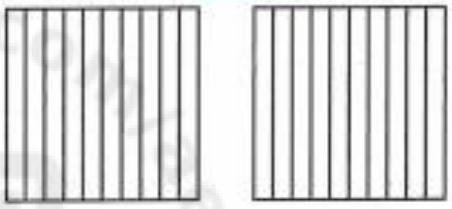
Q13	Represent addition of decimals using decimal grids	(1-7)	Page 101

What is the sum? Use the decimal grids.

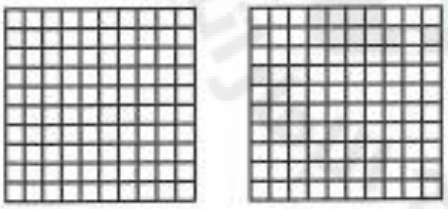
1. $0.7 + 0.1 =$ _____



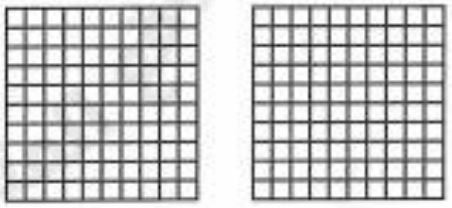
2. $0.5 + 0.8 =$ _____



3. $0.02 + 0.09 =$ _____



4. $0.78 + 0.64 =$ _____



What is the sum? Use decimal grids to show the sum.

5. $0.2 + 0.7 =$ _____

6. $0.5 + 0.6 =$ _____

7. $0.08 + 0.06 =$ _____

Q14	Use strategies to add decimals	Learn	Page 108

Learn

How can you determine the total cost of the helicopter and robot?

$17.31

$12.45

Math is... Modeling

What equation can you use to represent the problem?

You can use partial sums to determine the total cost.

One Way Decompose by place value.

$17.31 + 12.45 = c$

$10 + 7 + 0.3 + 0.01 \qquad 10 + 2 + 0.4 + 0.05$

$10 + 10 = 20$
$7 + 2 = 9$
$0.3 + 0.4 = 0.7$
$0.01 + 0.05 = 0.06$

Find partial sums

Add partial sums to find the sum

$20 + 9 + 0.7 + 0.06 = 29.76$

Another Way Decompose into whole numbers and decimals.

$17.31 + 12.45 = c$

$17 + 0.31 \qquad 12 + 0.45$

$17 + 12 = 29$
$0.31 + 0.45 = 0.76$

Find partial sums

Add partial sums to find the sum

$29 + 0.76 = 29.76$

We can decompose decimals different ways to find partial sums.

Q14	Use strategies to add decimals	(1-9)	Page 109

What is the sum? Use partial sums to solve.

1. $2.57 + 8.4$
   $= 2 + 0.5 + 0.07 + 8 + 0.4$
   $=$ _____

2. $6.9 + 0.31$
   $= 6 + 0.9 + 0.3 + 0.01$
   $=$ _____

3. $35.12 + 64.73 =$ _____

4. $70.34 + 21.52 =$ _____

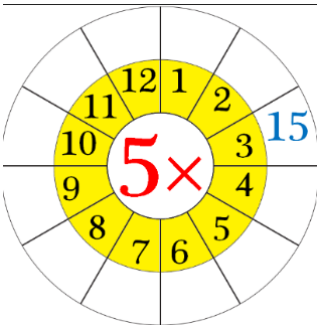
5. $14.53 + 11.2 =$ _____

6. $104.75 + 21.9 =$ _____

7. Mattis earns $22.50 shoveling snow. Later, he finds $0.82 in his backpack. How much money does he have now?

8. Josh's suitcase weighs 13.4 pounds. Karen's suitcase weighs 21.63 pounds. What is the total weight of the two suitcases?

9. Kim's goal was to run at least 10 miles this week to train for her cross-country race. On Tuesday she ran 3.57 miles, and on Wednesday she ran 6.48 miles. Did Kim reach her goal? Explain.



Q15	Represent Subtraction of Tenths and Hundredths	Learn+Work Together	Page 116

Learn

The table shows different lengths of insects.

How can you find how much longer the ant is than the aphid? The beetle than the ladybug?

Insect	Length (cm)
Beetle	0.7
Ant	0.64
Ladybug	0.43
Aphid	0.3

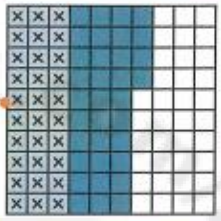
You can use subtraction to find the differences in lengths.

Find how much longer the ant is than the aphid.

$0.64 - 0.3 = 0.34$

The ant is 0.34 centimeter longer than the aphid.

0.3 is the same as 0.30.



Math is... Perseverance

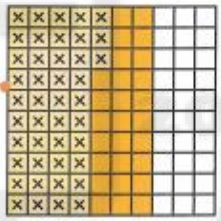
How can you use addition to check that the answer is correct?

Find how much longer the beetle is than the ladybug.

$0.7 - 0.43 = 0.27$

The beetle is 0.27 centimeter longer than the ladybug.

0.7 is the same as 0.70.



Sometimes you need to convert tenths to hundredths to help solve subtraction equations involving decimals.

Work Together

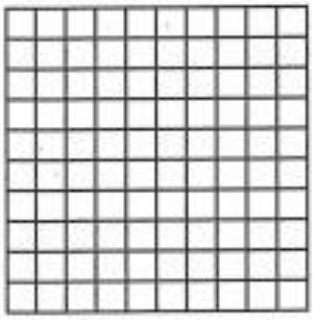
Marcus is using a decimal grid to solve $0.93 - 0.6 = r$.

How can he show subtracting 0.6?
Explain your reasoning.

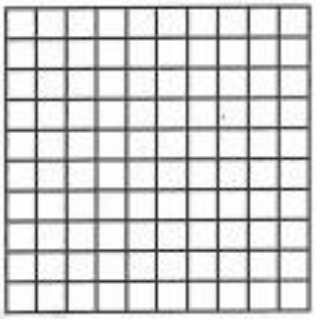
Q15	Represent Subtraction of Tenths and Hundredths	(1-8)	Page 117

What is the difference? Use the decimal grids to solve.

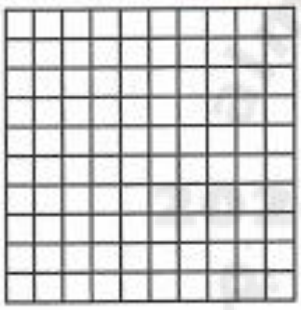
1. $0.54 - 0.1 =$ _____

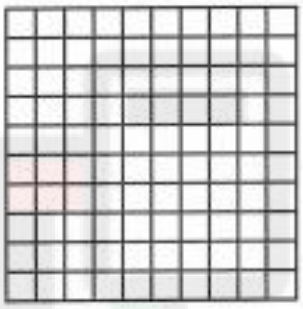


2. $0.9 - 0.02 =$ _____

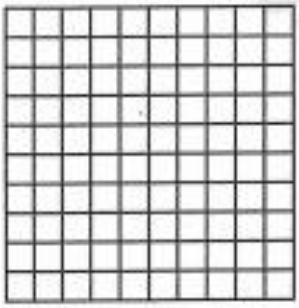


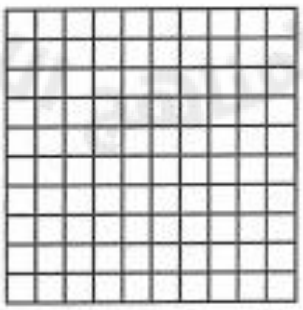
3. $1.07 - 0.3 =$ _____





4. $1.28 - 0.7 =$ _____





What is the difference? Use decimal grids to solve.

5. $2.3 - 0.27 =$ _____

6. $2.7 - 1.68 =$ _____

7. $1.74 - 0.8 =$ _____

8. $2.25 - 1.8 =$ _____

Q16	Strategies to Subtract Decimals	Learn	Page 120

Learn

How can you determine how much more precipitation Olympia, Washington receives than Salem, Oregon?

One Way Decompose by place value to subtract.

$23.89 - 19.29 = p$

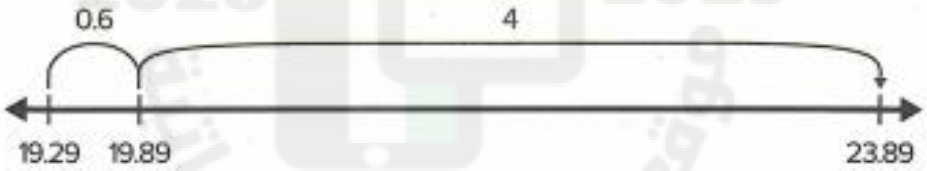
$23.89 - 10 = 13.89$
$13.89 - 9 = 4.89$
$4.89 - 0.2 = 4.69$
$4.69 - 0.09 = \mathbf{4.60}$

Math is... Choosing Tools

Is the calculated answer reasonable? How do you know?

Another Way Count on a number line to subtract.

$19.29 + p = 23.89$



$19.29 + \mathbf{4.6} = 23.89$

On average, Olympia receives 4.6 inches more precipitation than Salem.

You can use the same strategies to subtract decimals as you did to subtract whole numbers.

Q16	Strategies to Subtract Decimals	(1-6)	Page 121

Decompose by place value to find the difference.

1. 8.57 − 2.4

   8.57 − 2 = _____

   _____ − 0.4 = _____

   8.57 − 2.4 = _____

2. 7.73 − 5.1

   7.73 − 5 = _____

   _____ − 0.1 = _____

   7.73 − 5.1 = _____

Count on to find the difference.

3. 6.31 − 0.9 = _____

4. 64.19 − 35.75 = _____

What is the difference? Show your work.

5. 36.33 − 32.29 = _____

6. 48.56 − 18.21 = _____

Q17	Understand Powers and Exponents	Learn	Page 136

Learn

At Week 1, Dean had 10 pennies Each week after, Dean increased the number of pennies by 10 times the previous week.

During which week will Dean have 1,000,000 pennies?

You can organize the information in a table to help determine the solution.

Math is... Patterns

What patterns do you notice in the table?

Week	Multiplication Expression	Number of Pennies Added each Week
1	10	10
2	10 × 10	100
3	10 × 10 × 10	1,000
4	10 × 10 × 10 × 10	10,000
5	10 × 10 × 10 × 10 × 10	100,000
6	10 × 10 × 10 × 10 × 10 × 10	1,000,000

A **power of 10** is the product of 10 multiplied by itself a number of times.

Dean will have 1,000,000 pennies in Week 6.

You can write a power of 10 as a multplication expression with factors of 10.

You can also write a power of 10 in **exponential form** using a **base** and an **exponent**.

$10 \times 10 = 10^2$ ← exponent

2 factors

base

Q17	Understand Powers and Exponents	(1-13)	Page 137

Write the exponential form as a multiplication expression.

1. 10^4

2. 10^2

3. 10^3

4. 10^6

Write the exponential form.

5. $10 \times 10 \times 10 =$ _____

6. $10 \times 10 \times 10 \times 10 \times 10 =$ _____

7. $10 \times 10 \times 10 \times 10 =$ _____

8. $10 \times 10 =$ _____

Write the exponential form of each power of 10.

9. $10 =$ _____

10. $1{,}000 =$ _____

11. $100 =$ _____

12. $10{,}000 =$ _____

13. Rachel finds the value of 10^5 as shown. Do you agree with her solution? Tell why.

$10^5 = 10 \times 5 = 50$

Q18	Determine the products of numbers multiplied by powers of 10 written with exponents	(1-13)	Page141

What is the product? Use patterns to solve.

1. $12 \times 10 =$ _____
   $12 \times 100 =$ _____
   $12 \times 1{,}000 =$ _____

2. $24 \times 1{,}000 =$ _____
   $24 \times 10{,}000 =$ _____
   $24 \times 100{,}000 =$ _____

3. $33 \times 10^2 =$ _____
   $33 \times 10^3 =$ _____
   $33 \times 10^4 =$ _____

4. $57 \times 10^4 =$ _____
   $57 \times 10^5 =$ _____
   $57 \times 10^6 =$ _____

What is the product?

5. 23×10^3

6. 581×10^2

7. 60×10^4

8. 103×10^2

What is the unknown factor?

9. $571 \times$ _____ $= 5{,}710$

10. $43 \times$ _____ $= 4{,}300{,}000$

11. $6 \times$ _____ $= 6{,}000$

12. $28 \times$ _____ $= 280{,}000$

13. How can you describe the relationship between the equations shown?

$6 \times 10^5 = 600{,}000$
$6 \times 10^7 = 60{,}000{,}000$
$6 \times 10^9 = 6{,}000{,}000{,}000$

Q19	Use Partial Products to Multiply Multi-Digit Factors	Learn	Page 152

Learn

A stadium has 164 rows of seats.

How many seats are in the stadium?

You can use partial products to solve the problem.

Decompose the factors by place value.

$164 = 100 + 60 + 4$

$82 = 80 + 2$

Determine the partial products.

$$\begin{array}{r} 164 \\ \times\ 82 \\ \hline 8{,}000 \leftarrow 80 \times 100 \\ 4{,}800 \leftarrow 80 \times 60 \\ 320 \leftarrow 80 \times 4 \\ 200 \leftarrow 2 \times 100 \\ 120 \leftarrow 2 \times 60 \\ +\ \ 8 \leftarrow 2 \times 4 \\ \hline 13{,}448 \end{array}$$

Multiply 80 by 100, 60, and 4.

Multiply 2 by 100, 60, and 4.

Add the partial products.

There are 13,448 seats in the stadium.

Math is... Generalizations

How does the area model help you understand how this strategy works?

Partial products is another multiplication strategy you can use to multiply multi-digit whole numbers.

Q19	Use Partial Products to Multiply Multi-Digit Factors	(1-8)	Page 153

Find the unknown partial products. Then find the product.

1.
$$\begin{array}{r} 325 \\ \times \quad 73 \\ \hline 21{,}000 \\ 1{,}400 \\ 350 \\ \square \\ \square \\ + \square \\ \hline \square \end{array}$$

2.
$$\begin{array}{r} 104 \\ \times \quad 28 \\ \hline 32 \\ 800 \\ \square \\ + \square \\ \hline \square \end{array}$$

What is the product? Use partial products to solve.

3. $\begin{array}{r} 17 \\ \times 86 \\ \hline \end{array}$

4. $\begin{array}{r} 24 \\ \times 129 \\ \hline \end{array}$

5. $\begin{array}{r} 36 \\ \times 93 \\ \hline \end{array}$

6. $\begin{array}{r} 222 \\ \times 58 \\ \hline \end{array}$

7. A sporting goods store sold 24 mountain bikes. How much money did they make selling bikes?

8. The store also sold 12 mountain bike and scooter packages each for $367. How much money did they make?

Q20	Estimate Products of Multi-Digit Factors	Learn	Page 144

Learn

On Saturday, 432 people go to the theater.

About how much money does the theater collect on Saturday?

You can use strategies you know to determine a reasonable estimate.

One Way Compatible numbers

432×13

$400 \times 15 = 4 \times 100 \times 15$
$= 4 \times 15 \times 100$
$= 6{,}000$

The theater collects about \$6,000.

Another Way Rounded factors

432×13

$430 \times 10 = 4{,}300$

The theater collects about \$4,300.

Math is... Choosing Tools

What can and can't an estimated product tell you?

A reasonable estimate is between \$4,300 and \$6,000.

You can use these estimates to determine that the calculated solution of \$5,616 is a reasonable answer.

Estimated products can help you determine whether calculations are reasonable

Q20	Estimate Products of Multi-Digit Factors	(1-9)	Page 145

Estimate the product.

1. 643 × 18
2. 325 × 62
3. 438 × 27
4. 572 × 49

5. On a school trip, 54 students went to a museum. Each ticket cost $23. About how much did all students spend on tickets?

6. The town library has 478 shelves. Each shelf holds 38 books. About how many books does the library have?

7. A vendor at a fair is selling her paintings for $23 each. Over the course of the fair, 339 people purchase her paintings. About how much did the vendor earn over the course of the fair?

8. The fifth graders sold 405 baked goods at the bake sale. About how much did the fifth graders earn?

9. **Error Analysis** Han estimates that the product of 492 and 32 will be 1,200. How do you respond to Han?

Q21	Patterns When Multiplying Decimals by Powers of 10	(1- 7)	Page 175

Write the multiplication expression using factors of 10. Then, find the value.

1. 3.6×10^2

2. 7.2×10^3

3. 4.8×10^4

4. 1.9×10^2

5. Ashley rides the train to visit her grandmother. She lives 1.2×10^2 miles away from her grandmother. How many miles does she travel?

6. Juan walks 4.7×10^3 meters from his house to the museum. Mary walks 9.3×10^2 meters from her house to the museum. Who walks farther, Juan or Mary? How do you know?

7. **Error Analysis** Sasha multiplied the decimals as shown. How can you help Sasha understand the patterns in multiplying decimals by powers of 10?

$3.5 \times 10^2 = 3{,}500$
$3.5 \times 10^3 = 35{,}000$
$3.5 \times 10^4 = 350{,}000$

Q22	Use decimal grids to help represent and solve multiplication equations involving decimals	Learn +(1- 4)	Page 182 & 183

Learn

Jonah will make 5 turkey sandwiches. He will use 0.04 pound of lettuce for each sandwich. Lettuce costs $0.90 per pound.

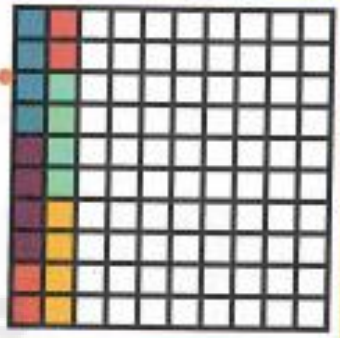
How can you determine the cost of lettuce for all 5 sandwiches?

You can use decimal grids to help you solve the problem.

Find the total amount of lettuce, p.

$5 \times 0.04 = p$

Show 5 groups of 0.04.



There are 20 hundredths of the whole shaded.

Jonah needs 0.2 pound of lettuce to make all 5 sandwiches.

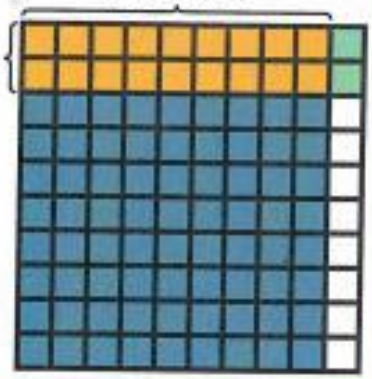
Find the total cost, c.

$0.2 \times 0.9 = c$

There are 18 hundredths of the whole shaded.

Shade 0.9 of the whole.

Shade 0.2 of 0.9.



The cost of lettuce for 5 sandwiches is $0.18.

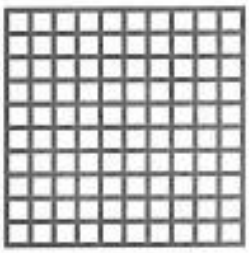
Math is... Modeling

How do decimal grids help you understand multiplying decimals?

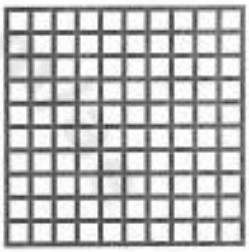
Q22	Use decimal grids to help represent and solve multiplication equations involving decimals	Learn +(1- 4)	Page 182 & 183

Write an equation and use a decimal grid to help you solve.

1. Laura pours 0.08 liter of milk into her tea each day. How much milk does Laura use in her tea in one week?



2. Jason buys 0.9 pound of cabbage. The grocery store charges $0.60 per pound. How much will Jason pay for the cabbage?



3. Tonya cuts 0.4 meter of ribbon for each gift she wraps. She wraps 6 gifts. How much ribbon does Tonya use?

4. **STEM Connection** A rock has a mass of 2.4 kilograms. Maya estimates that the amount of granite in the rock is 0.3 of the full mass of the rock. How much granite is in the rock?

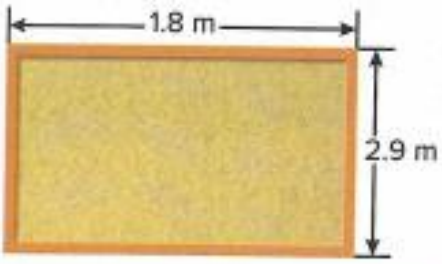
Q23	Use an Area Model to Multiply Decimals	Learn + (1-8))	Page 188 & 189

Learn

How can you find the area of the board?

You can use the equation $1.8 \times 2.9 = A$ to represent the problem.

You can use an area model to help you solve the equation.



Decompose each factor and find partial products.

	2	+	0.9
1	$2 \times 1 = 2$		$0.9 \times 1 = 0.9$
+			
0.8	$2 \times 0.8 = 1.6$		$0.9 \times 0.8 = 0.72$

Decompose by place value.

Find partial products by finding the area of each rectangle.

Add partial products.

$2 + 0.9 + 1.6 + 0.72 = 5.22$

The area of the board is 5.22 square meters.

Math is... Modeling

How are the area models for decimals and whole numbers similar?

One multiplication strategy for multiplying decimals is to use an area model to determine partial products, which are then added to determine the product.

Q23	Use an Area Model to Multiply Decimals	Learn + (1-8))	Page 188 & 189

What is the product? Use an area model to solve.

1. $32 \times 1.5 =$ _____
2. $14 \times 2.3 =$ _____
3. $7.1 \times 8 =$ _____
4. $6.2 \times 1.5 =$ _____
5. $9.6 \times 5.5 =$ _____
6. $1.9 \times 2.4 =$ _____

7. A tent repair shop charges $9.50 for every 1 meter of stitching repaired on a tent. Michael brings in his tent for repairs. It needs 1.2 meters of stitching. How much will the repairs cost him?

8. **Error Analysis** Evelyn used an area model to multiply 7.4×1.2 as shown. How do you respond to her work?

	1	+	2
7	$7 \times 1 = 7$		$7 \times 2 = 14$
+			
4	$4 \times 1 = 4$		$4 \times 2 = 8$

$7 + 14 + 4 + 8 = 33$

Q24	Use an Area Model to Multiply Decimals	(1 -11)	Page 193

Complete each sentence.

1. 3.8 is _____ of 38.

   So, 3.8 × 25 is _____ of the product 38 × 25.

2. 0.45 is _____ of 45.

   So, 0.45 × 16 is _____ of the product 45 × 16.

3. 7.8 is _____ of 78 and 9.2 is _____ of 92.

   So, 7.8 × 9.2 is _____ of the product 78 × 92.

What is the product? Use patterns to solve.

4. 45 × 17 = 765
   45 × 1.7 = _____
   45 × 0.17 = _____

5. 32 × 14 = _____
   32 × 1.4 = 44.8
   3.2 × 1.4 = _____

6. 16 × 89 = 1,424
   16 × 8.9 = _____
   16 × 0.89 = _____

7. 61 × 22 = _____
   6.1 × 22 = 134.2
   6.1 × 2.2 = _____

8. 96 × 55 = _____
   96 × 5.5 = _____
   9.6 × 5.5 = 52.8

9. 19 × 42 = _____
   1.9 × 42 = 79.8
   1.9 × 4.2 = _____

10. 67 × 34 = _____
    67 × 3.4 = _____
    6.7 × 3.4 = _____

11. 82 × 67 = _____
    82 × 6.7 = _____
    8.2 × 6.7 = _____

Q25	Division Patterns with Multi-Digit Numbers	Learn + (1-10)	Page 208 & 209

Learn

There are 12,000 nickels.

How can you find the number of rolls of nickels?

Patterns can help you solve the problem.

$12{,}000 \div 40 = n$

You can use a basic fact and patterns to help you solve the equation.

basic fact → $12 \div 4 = 3$

$120 \div 40 = 3$

Both the dividend and divisor are 10 times as much, so quotient is the same.

When only the dividend is 10 times as much, the quotient is also 10 times as much.

$120 \div 40 = 3$

$1{,}200 \div 40 = 30$

$12{,}000 \div 40 = 300$

As the number of zeros in the dividend increases, the number of zeros in the quotient also increases.

There are 300 rolls of nickels.

Math is... Structure

How can you use place value to explain this pattern?

You can use patterns in the number of zeros to help you divide by a multiple of 10.

Use a basic fact and patterns to solve.

1. $15 \div \_\_\_\_ = 5$

   $150 \div 30 = \_\_\_\_$

   $\_\_\_\_ \div 30 = 50$

   $15{,}000 \div \_\_\_\_ = \_\_\_\_$

2. $32 \div 8 = \_\_\_\_$

   $\_\_\_\_ \div 80 = \_\_\_\_$

   $3{,}200 \div \_\_\_\_ = \_\_\_\_$

   $\_\_\_\_ \div \_\_\_\_ = \_\_\_\_$

3. $20{,}000 \div 40 = \_\_\_\_$

4. $15{,}000 \div 30 = \_\_\_\_$

5. $18{,}000 \div 60 = \_\_\_\_$

6. $16{,}000 \div 80 = \_\_\_\_$

7. $8{,}000 \div 40 = \_\_\_\_$

8. $25{,}000 \div 50 = \_\_\_\_$

9. $32{,}000 \div 80 = \_\_\_\_$

10. $9{,}000 \div 30 = \_\_\_\_$

GOOD LUCK

MS/Sara Gamal