lesson nineteen - student resource sheet

Lesson Objective: Add and subtract decimals to the hundredths place, using horizontal and vertical formats, with varying numbers of digits.

Vocabulary Box

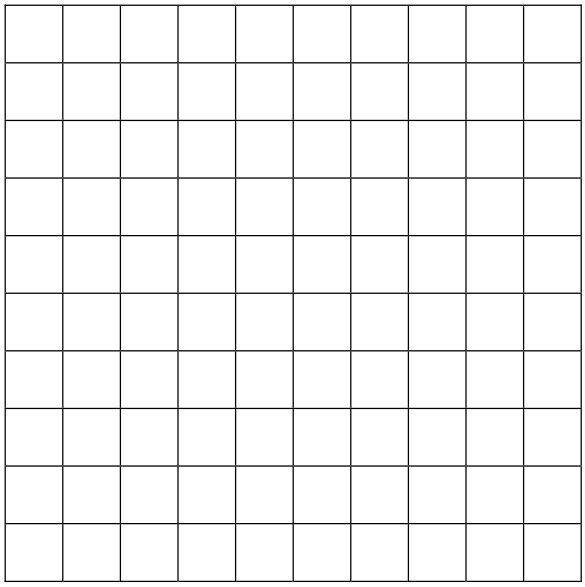
ones — The lowest place value for a whole number. Example: In the number 27.49, the digit 7 is in the ones place. It has a value of 7 ones, or 7.

tens — The second-lowest place value for a whole number. Example: In the number 27.49, the digit 2 is in the tens place. It has a value of 2 tens, or 20.

tenths — The highest place value for a decimal. Example: In the number 27.49, the digit 4 is in the tenths place. It has a value of 4 tenths, or 0.4.

hundredths — The second-highest place value for a decimal. Example: In the number 27.49, the digit 9 is in the hundredths place. It has a value of 9 hundredths, or 0.09.

Tens	Ones	Decimal Point	Tenths	Hundredths
2	7	.	4	9

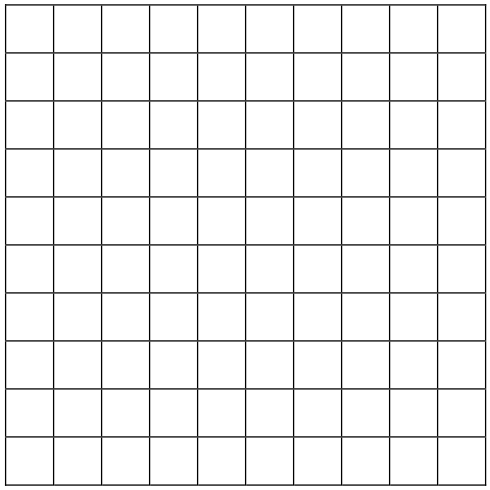


Independent Practice

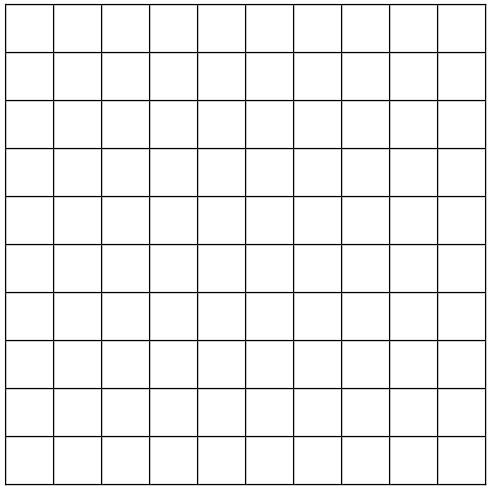
Directions: Complete the following practice problems on your own. Your teacher will review the answers.

I. Use shading on grid paper to model each problem. Then, use your model to find the sum or difference.

1. 0.79 + 0.08 = _____



2. 0.55 – 0.37 = _____



II. Rewrite each problem stacked. Remember to line up the decimal points. Then, use place value to find each sum or difference.

1. 0.94 + 0.67 = _____

2. 1.51 – 0.62 = _____

III. Find each sum or difference. Then use opposite operations to check your answers.

1. 3.12
   –1.65

2. 20.3
   +3.72

Directions: Circle the number that makes each equation true.

1. 0.4 + _____ = 1.2

   1.2 0.8 0.6

2. _____ – 0.54 = 0.25

   0.79 0.29 0.71

3. _____ + 1.75 = 4.00

   3.75 2.25 5.75

4. 5.08 – _____ = 1.01

   4.07 3.7 6.09

Problem Solving

Maria and Jake had lunch at Jimmy's Diner, today. Maria bought a grilled cheese sandwich and a large drink. Jake bought a cheeseburger and a small drink. Jimmy's lunch menu is shown below. All of the prices include tax.

JIMMY'S LUNCH SPECIALS

Sandwiches		Drinks	
Cheeseburger	$3.79	Large	$2.25
Cold Cut	$4.25	Medium	$1.95
Tuna Salad	$3.29	Small	$1.75
BLT	$4.10		
Grilled Cheese	$2.45		

1. How much did Maria's lunch cost?

   Find the information needed to solve the problem.
   Grilled Cheese = _____
   Large Drink = _____

   Use the information to answer the question.

   Check your answer.

   Write your answer in a complete sentence. Use words from the problem.

2. How much did Jake's lunch cost? Remember to write your answer in a complete sentence.

3. Maria and Jake paid for their lunches, together. They gave the cashier $15.00. How much change did they get?

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1. When I add or subtract decimals, I always start by adding or subtracting the digits in the _____ place value.

2. 0.72 + 0.41 = _____

3. 4.6 – 2.08 = _____

lesson twenty - student resource sheet

Lesson Objective: Multiply multi-digit numbers by multi-digit numbers.

Vocabulary Box

factor — A number that is multiplied by another number to find a product.
Example: In $3 \times 5 = 15$, 5 and 3 are the factors, and 15 is the product.

partial product — One of the smaller products found when multiplying each place value of a factor separately. The sum of the partial products is the total product of the factors. Example: $34 \times 5 = (30 \times 5) + (4 \times 5) = 150 + 20 = 170$. The 150 and 20 are the two partial products.

regroup — To exchange amounts of equal value to rename a number.
Examples: 23 ones can be regrouped as 2 tens and 3 ones (23 = 20 + 3), and 4 hundreds and 7 tens can be regrouped as 470 ones (400 + 70 = 470).

Guided Practice

Directions: Complete the following practice problems with your partner. Your teacher will review the answers. Make sure you show all your work.

I. Use partial products to solve each problem.

1. $135 \times 40 =$ _____

   Break apart 135:
   135 = 100 + 30 + 5

   Find partial products:
   $100 \times 40 =$ _____
   $30 \times 40 =$ _____
   $5 \times 40 =$ _____

   Add partial products:
   Sum = _____

2. $4{,}617 \times 20 =$ _____

   Break apart 4,617:
   4,617 = 4,000 + 600 + 10 + 7

   Find partial products:
   $4{,}000 \times 20 =$ _____
   $600 \times 20 =$ _____
   $10 \times 20 =$ _____
   $7 \times 20 =$ _____

   Add partial products:
   Sum = _____

II. Use partial products to find each product.

1. $241 \times 36 =$ _____

Th	H	T	O
	2	4	1
×		3	6
+			

2. $1{,}324 \times 13 =$ _____

TTh	Th	H	T	O
	1	3	2	4
×			1	3
+				

III. Use partial products to find each product. Please work independently.

1. 419
   ×27

2. 5,641
   ×30

Summary/Closure

A. Vocabulary Words

Use the problem shown below and the vocabulary terms to complete the following sentences.

$$\begin{array}{r} 479 \\ \times 32 \\ \hline 958 \\ +14,370 \\ \hline 15,328 \end{array}$$

1. In this problem, the _____ are 479 and 32.

2. The _____ are 958 and 14,370.

3. When you multiply the 2 ones in 32 by the 9 ones in 479, the product is 18 ones. You _____18 as 1 ten and 8 ones.

B. Summarize What We Learned Today

Write two multiplication problems. The first problem should be multiplying a four-digit number by 20. Use partial products to solve that problem. The second problem should be multiplying a three-digit number by 16. Use words or pictures to explain how you solved each problem. You will use these notes and explanations as a personal reminder.

lesson twenty-one - student resource sheet

Lesson Objective: Multiply multi-digit numbers by multi-digit numbers.

Vocabulary Box

factor — A number that is multiplied by another number to find a product.
Example: In $3 \times 5 = 15$, 5 and 3 are the factors, and 15 is the product.

partial product — One of the smaller products found when multiplying each place value of a factor separately. The sum of the partial products is the total product of the factors. Example: $34 \times 5 = (30 \times 5) + (4 \times 5) = 150 + 20 = 170$. The 150 and 20 are the two partial products.

regroup — To exchange amounts of equal value to rename a number.
Examples: 23 ones can be regrouped as 2 tens and 3 ones (23 = 20 + 3), and 4 hundreds and 7 tens can be regrouped as 470 ones (400 + 70 = 470).

Independent Practice

Directions: Complete the following practice problems on your own. Your teacher will review the answers.

I. Use partial products to solve each problem.

1. $827 \times 50 =$ _____

   Break apart 827:
   827 = _____

   Find partial products:
   _____ $\times$ 50 = _____
   _____ $\times$ 50 = _____
   _____ $\times$ 50 = _____

   Add partial products:
   Sum = _____

2. $3{,}152 \times 30 =$ _____

   Break apart 3,152:
   3,152 = _____

   Find partial products:
   _____ $\times$ 30 = _____
   _____ $\times$ 30 = _____
   _____ $\times$ 30 = _____
   _____ $\times$ 30 = _____

   Add partial products:
   Sum = _____

II. Use partial products to find the product.

1. $568 \times 27 =$ _____

TTh	Th	H	T	O
		5	6	8
×			2	7
+				

III. Use partial products to find each product.

1. 725
   ×48

2. 7,261
   ×30

Directions: Use estimation to check each product. If you think the answer is reasonable, write a check mark next to the product. If you think the answer is wrong, write an *X* next to the product. Show all your work.

Follow these steps to use estimation to check a product:

1. Round each factor to its greatest place value.
2. Multiply the rounded factors.
3. Compare that estimated product to your exact product. If the two products are fairly close, your exact answer is reasonable. If the two products are very different, your exact answer is probably wrong.

Exact Answer **Estimated Answer**

1. $715 \times 29 = 20{,}735$
2. $4{,}865 \times 12 = 15{,}495$
3. $231 \times 56 = 1{,}288$
4. $8{,}240 \times 35 = 288{,}400$

lesson twenty-one - student resource sheet

Problem Solving

The chart below shows some different units of time. There are eight more days until summer vacation starts. How many minutes is that?

1 minute	**=**	**60 seconds**
1 hour	**=**	**60 minutes**
1 day	**=**	**24 hours**
1 week	**=**	**7 days**

1. Identify the steps you need to follow to solve the problem.
   Find how many hours are in eight days.
   Then find how many minutes are in that many hours.

   a. Find how many hours are in eight days.

   number of days $\times$ hours in one day = number of hours
   $8 \times 24 =$ _____

   You can break up 24 into two smaller numbers to find this product.
   $24 = 20 + 4$
   $8 \times 20 = 160$
   $8 \times 4 =$ _____
   $160 +$ _____ = _____

   b. Find how many minutes are in that many hours.

   number of hours $\times$ minutes in 1 hour = number of minutes
   $192 \times 60 =$ _____

   You can break up 192 into 3 smaller numbers to find this product.
   $192 = 100 = 90 + 2$
   $100 \times 60 =$ _____
   $90 \times 60 =$ _____
   $2 \times 60 =$ _____
   _____ + _____ + _____ = _____

   c. Write your answer in a complete sentence. Use words from the problem.

2. In two weeks, Manuel will get his new bicycle. How many minutes is that? Show all your work. Be sure to write your answer in a complete sentence.

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1. 574 x 23 = _____

2. 372 x 60 = _____

3. 2,451
   ×24