

SFUSD Math Core Curriculum

Grade 4 Homework

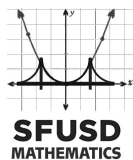


Unit 4.0 Introduction

Unit 4.1 Structure of Whole Numbers

Unit 4.2 Whole Number Multiplication

Unit 4.3 Whole Number Division

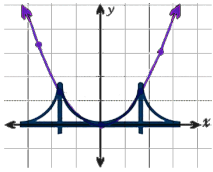


SFUSD Math Core Curriculum

Unit 4.0 Introduction

Homework





SFUSD
MATHEMATICS

Fourth Grade Family Letter

Unit 0: Introduction to Grade 4

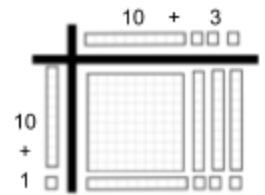
Welcome to Grade 4 Mathematics.

We are excited to be using a math curriculum based on current standards and reflecting research-based teaching practices. Education is always evolving to prepare our students for a future that will likely be quite different from today. As such, we strive to build a strong foundation in problem solving, conceptual understanding, and procedural fluency. Topics will be taught so that they build on previous understanding and prepare students for future math learning.

In Grade 4 we will be focusing on three critical content areas:

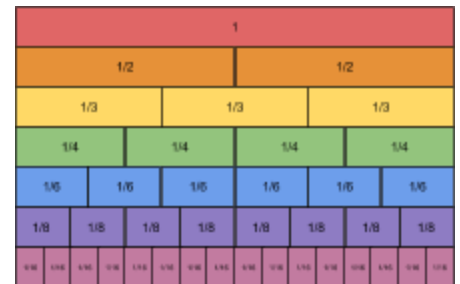
1. Developing understanding and fluency with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends.

- Using the four operations with whole numbers to solve problems.
- Using place value understanding and properties of operations to perform multi-digit arithmetic.
- Gaining familiarity with factors and multiples.



2. Developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers.

- Extending understanding of fraction equivalence and ordering.
- Building fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

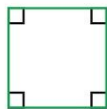


3. Understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

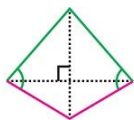
- Drawing and identifying lines and angles, and classifying shapes by properties of their lines and angles.



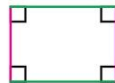
Rhombus



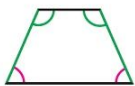
Square



Kite



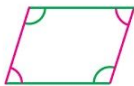
Rectangle



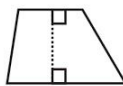
Isosceles Trapezoid (Am.)
Isosceles Trapezium (Br.)



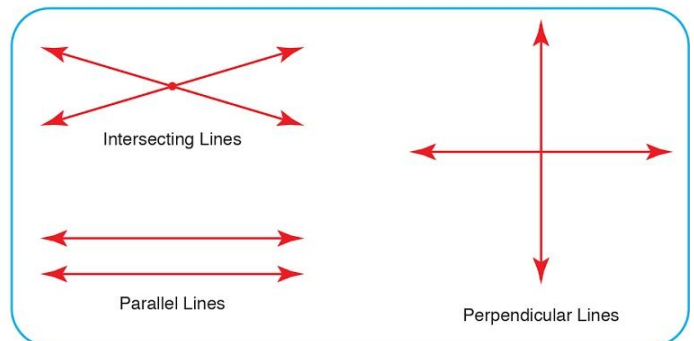
Trapezium
(Amer. Eng.)



Parallelogram



Trapezoid
(Amer. Eng.)
Trapezium (Brit. Eng.)



For the first five days of the school year we will be working in Unit 0. In Unit 0 we will be establishing important routines and procedures that will support math learning throughout the year.

Math Norms

Unit 0 lays the groundwork for what it means to be a math learner and a member of a math community. Math Norms support an environment that promotes group work and meaningful discussion.

Errors are gifts that promote discussion.



Answers are important, but they are not the math.



Talk about each other's thinking.



Ask questions until ideas make sense.



Use multiple strategies and multiple representations.



Math Talks

Math Talks are teacher-led, student-centered techniques for building math thinking and academic discourse. They allow for multiple entry points and encourage students to value the thinking of others so that they can build a better understanding of their own thinking. Math Talks support students in developing their mental math skills.

Rich Math Tasks

A rich math task is part of a balanced approach to mathematics that includes conceptual understanding, problem-solving, and procedural fluency, and offers every student opportunities to engage in meaningful, rigorous mathematics. A rich math task takes time to solve and lends itself to collaboration and multiple perspectives. These tasks create the context in which students build multiple representations and communicate their reasoning. Most of the math tasks are designed for group or partner work.



Math Notebooks

Students will use their Math Notebooks students regularly to develop their understanding of concepts, and extend that understanding with multiple representations and precise mathematical vocabulary.

Partner/Group Work

Students will work a lot with partners and groups throughout the year. Students will be developing skills in effectively communicating their mathematical thinking to others and building on the thinking of others. They will also have opportunities to defend their ideas and critique the reasoning of others.

The following page has some ideas for ways you can help your child with their homework.

Family Guide

As your child works through homework exercises, you can help him or her develop skills with these Math Practice Standards by asking some of these questions:

- **Make sense of problems and persevere in solving them.**
 - What are you solving for in the problem?
 - Can you think of a problem that you have solved before that is like this one?
 - How will you go about solving it? What's your plan?
 - Are you making progress toward solving it? Should you try a different plan?
 - How can you check your answer? Can you check using a different method?
- **Reason abstractly and quantitatively.**
 - Can you write or recall an expression or equation to match the problem situation?
 - What do the numbers or variables in the equation refer to?
 - What's the connection among the numbers and the variables in the equation?
- **Construct viable arguments and critique the reasoning of others.**
 - Tell me what your answer means.
 - How do you know that your answer is correct?
 - If I told you I think the answer should be (*offer a wrong answer*), how would you explain to me why I'm wrong?
- **Model with mathematics.**
 - Do you know a formula or relationship that fits this problem situation?
 - What's the connection among the numbers in the problem?
 - Is your answer reasonable? How do you know?
 - What does the number(s) in your solution refer to?
- **Use appropriate tools strategically.**
 - What tools could you use to solve this problem? How can each one help you?
 - Which tool is more useful for this problem? Explain your choice.
 - Why is this tool (*the one selected*) better to use than (*another tool mentioned*)?
 - Before you solve the problem, can you estimate the answer?
- **Attend to precision.**
 - What do the symbols that you used mean?
 - What units of measure are you using? (*for measurement problems*)
 - Explain to me (*a term from the lesson*).
- **Look for and make use of structure.**
 - What do you notice about the answers to the exercises you've just completed?
 - What do different parts of the expression or equation you are using tell you about possible correct answers?
- **Look for and express regularity in repeated reasoning.**
 - What shortcut can you think of that will always work for these kinds of problems?
 - What pattern(s) do you see? Can you make a rule or generalization?

Value of Letters

$a = 1$

$b = 2$

$c = 3$

$d = 4$

$e = 5$

$f = 6$

$g = 7$

$h = 8$

$i = 9$

$j = 10$

$k = 11$

$l = 12$

$m = 13$

$n = 14$

$ñ = 15$

$o = 16$

$p = 17$

$q = 18$

$r = 19$

$s = 20$

$t = 21$

$u = 22$

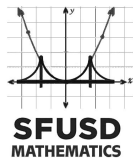
$v = 23$

$w = 24$

$x = 25$

$y = 26$

$z = 27$

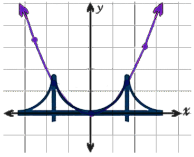


SFUSD Math Core Curriculum

Unit 4.1 Structure of Whole Numbers

Homework



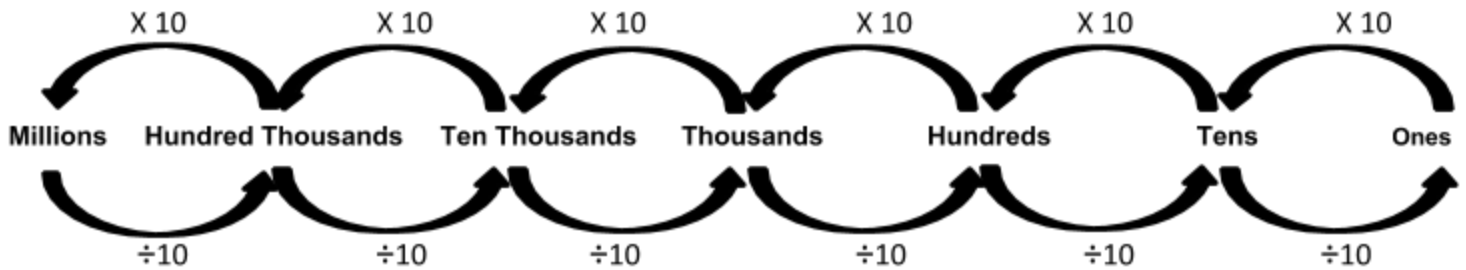


SFUSD
MATHEMATICS

Fourth Grade Family Letter

Unit 1: Structures of Whole Numbers

In kindergarten through Grade 3, students had many experiences with numbers, building their understanding of the base-10 number system and how it works. In Grade 4, students practice with one of the most important ideas about numbers: that any digit in a multi-digit number represents a number that is ten times greater than what it would represent one place to the right. Understanding how to describe and work with very large and very small numbers will be important for all future mathematics.



Expanded Form

Fourth graders continue to use expanded form to show their place value understanding, but with larger numbers than they worked with in Grade 3. Expanded form is an addition expression that shows the value of every digit and can be written with words or numbers, as well as written into a place value chart.

1,706, 539 =					
1,000,000	+ 700,000	+ 6,000	+ 500	+ 30	+ 9
1 million	+ 7 hundred thousand	+ 6 thousand	+ 5 hundred + thirty	+ nine	

An example of a place value chart:

MILLIONS				THOUSANDS				ONES		
hundred millions	ten millions	millions	,	hundred thousands	ten thousands	thousands	,	hundreds	tens	ones

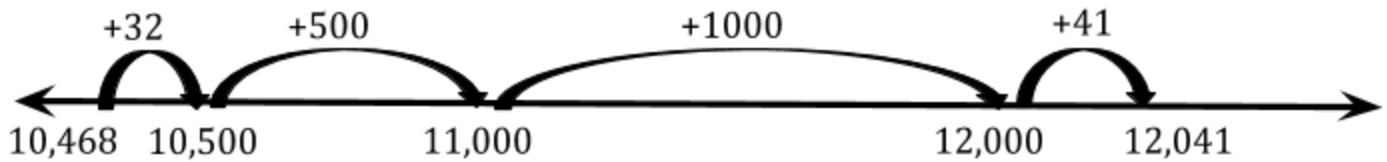
Algorithms for Adding and Subtracting

An algorithm is a step-by-step set of directions for solving a problem that is usually very efficient. In this unit, fourth graders will add and subtract with the Standard Algorithm. They will use numbers, pictures, and words to show how they understand the place value of each number in the process.

$$\begin{array}{r}
 615 \\
 375 \\
 \hline
 - 38 \\
 \hline
 337
 \end{array}$$

Use of Number Lines in Addition and Subtraction

Students will continue to use open number lines to support their calculations, working with much larger numbers. The number line below shows that a student can count up from 10,468 to 12,041 in increments that are easy to see and track, resulting in a difference of 1,573.



Activities You Can Do to Support Math at Home

Estimating and Rounding With Everyday Objects and Activities

Estimating is one of the most frequent everyday uses for mathematics. For example, we usually make plans to the closest hour versus to the exact minute, just as we usually think of money to the nearest dollar versus to the exact penny. Some estimation activities that will support your child are:

- Quickly estimate numbers in a group, such as how many boxes are on a shelf, or how many people are on a bus.
- Use estimation to think about money. For example, if you are shopping, and have bought a certain number of the same item, about how much is it altogether?

Remember you are not trying to get the right answer—you are trying to think of a number close enough to help you make a smart choice or understand a situation.

Math Notebooks

Writing and drawing in math is a great habit from the classroom that you can reinforce at home by having a special place for students to record their ideas and observations. In the classroom, students use their math notebooks regularly to develop their understanding of concepts and extend that understanding with multiple representations and precise mathematical vocabulary.

You can extend any math activity with writing. Students should look for more than one way to show their ideas, choosing from numbers and equations, words, drawing, and graphs or charts.



Math Homework (Entry 4.1)

1. Find the missing numbers:

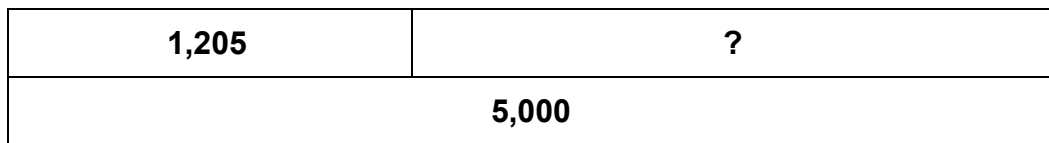


a. $\triangle =$ _____

b. Explain how you found \triangle

2. Emanuel wants to buy the PlayStation 4. He found it on sale for \$463.00. He has saved \$267.00 in his piggy bank. How much more money does he need to save to be able to buy the PlayStation 4? (Show your work)

3. Find the missing number to make this part-part-whole model.



4. Find the products.

a. $8 \times 4 =$ _____

b. $6 \times 5 =$ _____

c. $7 \times$ _____ $= 49$

d. $36 =$ _____ \times _____

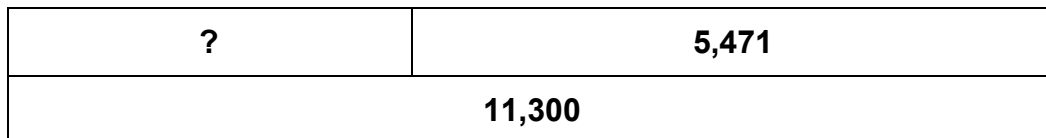
Name _____ Date: _____

Math Homework LS 1, Day 1

1. Write this number out in expanded form: 9,452,729

2. Write this number out in words: 9,452,729

3. Find the missing number to make this part-part-whole diagram.



4. Find the products.

a. $9 \times 5 =$ _____

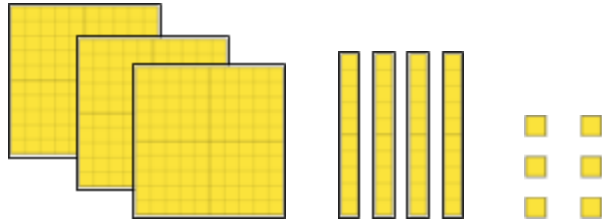
b. $4 \times 7 =$ _____

c. $9 \times$ _____ $= 72$

d. $42 =$ _____ \times _____

Math Homework LS1 Day 2

1. What number is represented by these base-10 blocks? How do you know?



2. Write the number from problem one in expanded form and in words.

expanded form:

word form:

3. Find the missing number to make this tape diagram.

?	4,495
10,000	

4. Find the products. What patterns do you notice in the products?

x	1	3	5	7	9
2					
4					
6					
8					
10					

Name _____ Date: _____

Math Homework LS1, Day 3

1. Write this number in expanded form: 96,902,123

2. Write this number in words: 96,902,123

3. Find the missing number to make this tape diagram.

12,309	5,471
?	

4. Find the products.

a. $8 \times 8 =$ _____

b. $4 \times 9 =$ _____

c. $6 \times$ _____ $= 42$

d. $48 =$ _____ \times _____

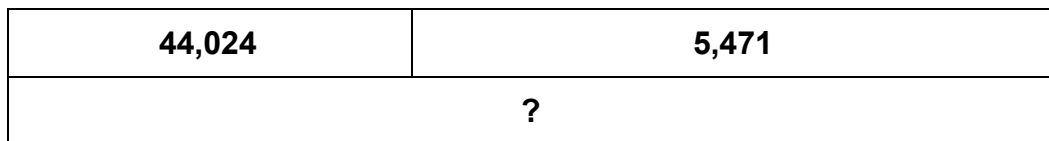
Name _____ Date: _____

Math Homework LS1 Day 4 HW

1. Write this number in expanded form: 9,452,729

2. Write this number in words: 8,770,709

3. Find the missing number to make this part-part-whole diagram.



4. Find the products.

a. $8 \times 5 =$ _____

b. $5 \times 7 =$ _____

c. $5 \times$ _____ $= 55$

d. $32 =$ _____ \times _____

Name: _____ Date: _____

Math Homework (Apprentice)

1. Write the number 3,480,064 in expanded form.

2. Write the number 3,480,064 in words.

3. At one store Roberto bought 10 packages of batteries. Each package had 24 batteries. At another store he bought 10 packages of batteries, but each package only had 15 batteries. How many batteries did Roberto buy in all? (Show your work.)

4. Solve the following problems:

a. $40 \times 10 =$ _____

b. $600 \times 200 =$ _____

c. $800 \times$ _____ $= 80,000$

d. _____ $\times 100 =$ _____

Math Homework LS 2 Day 1

1. Show where would you place the following numbers on the vertical number line if you were rounding to the nearest **thousand** labeling the appropriate endpoints and midpoints.

65,675



183,547



2. Round the following numbers to the **nearest 10 thousand**, then **find the difference**:

587,271

372,664

3. Find the difference between 962,327 and 861,469.

4. Create two 6-digit numbers of your own and find the difference between those two numbers.

Name _____ Date: _____

Math Homework LS2, Day 2

1. My grandmother was born on January 5, 1931. How old is she now? (Solve using an open number line.)

2a. What is the greatest 5-digit number? _____

2b. What is one more than the 5-digit number you wrote above? _____

2c. What number is after the number you wrote in problem 2b? _____

3. Follow the pattern and find the missing numbers.

8992	8994	_____	8998	_____	_____
------	------	-------	------	-------	-------

4. Round the number 37,544 to the nearest hundred.



Name: _____ Date: _____

Math Homework (4.1 Expert)

1. What was the difference between the populations of San Francisco (837,442) and Honolulu (374,658) in 2013? Show your work on an open number line.



2. Use a standard algorithm to solve Problem 1. Show your work.

3. Write the populations of San Francisco and Honolulu in expanded form.

San Francisco

Honolulu

4. Write the populations of San Francisco and Honolulu in words.

San Francisco:

Honolulu:

Name _____ Date: _____

Math Homework LS 3, Day 1

1. Fernando saves a total of 8,046 pennies every two weeks.
How many pennies does he save in 6 weeks? Show your work.

2. a. $4 \times 6 =$ _____ b. $8 \times 8 =$ _____ c. $40 \times 5 =$ _____

3. Follow the pattern and find the missing numbers.

_____	10,806	10,809	_____	10,815	_____
-------	--------	--------	-------	--------	-------

4. Round the number 12,853 to the highest place value.



Math Homework LS 3 Day 2

1. Show where you would place the following numbers on the vertical number line if you were rounding to the nearest **thousand**, labeling the appropriate endpoints and midpoints.

74,875



169,547



2. Round the following numbers to the **nearest 10 thousand**:

609,271: _____

322,664 : _____

3. Find the difference between 609,271 and 322,664. Show how you calculated the difference.

4. Create two 5-digit numbers of your own and find the difference between those two numbers.

Name _____ Date _____

4.1 LS3 Day 3 Homework

Emanuel goes to the video game store. He wants to buy some video games. The first one he looked at costs \$24.99. The second one he looked at costs \$32.99. The third one he looked at costs \$19.99. He has \$100 to spend.



Write an interesting math questions for this situation.

Answer your question below. Show your work.

Name: _____ Date: _____

Math Homework (Milestone)

1. Think about the Milestone Task you worked on called “**California’s Neighbors**” about area of states. What is something you feel you did particularly well and why?

2. On the same Milestone Task, what was one thing you were unsure about and why?

3. Compare the numbers, then choose from $<$, $>$, or $=$ to make the sentence true.

a. 5,461 _____ 5,385

c. 154,307 _____ 15,408

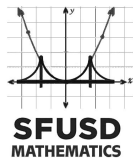
b. 1,093,006 _____ 1,437,627

d. 48675 _____ 48,670

4.

City	Population
San Francisco	837,442
Los Angeles	18,500,000
San José	998,537

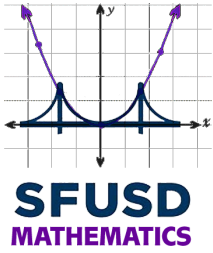
Round the populations of the 3 largest cities in California to their highest place value, then list them in order from least to greatest.



SFUSD Math Core Curriculum

Unit 4.2 Whole Number Multiplication

Homework 



Fourth Grade Family Letter

Unit 2: Whole Number Multiplication

Unit 4.2 is all about multiplication. Students will practice the multiplication facts they learned in third grade as they work with larger numbers. In this unit, students will learn to compare using multiplication, and will learn several ways to multiply two-digit numbers.

Comparison Using Multiplication

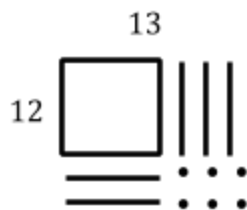
Students will have opportunities to compare numbers using multiplication, known as multiplicative comparison. For example, 24 is 6 times greater than 4. Real world examples might include that a \$24 sweatshirt costs three times as much as a matching shirt. Students would choose a model that helps them find the cost of the shirt.

Partial Product

Partial product is a strategy based on place value that allows a student to decompose or pull apart numbers, multiply the parts, then add them back together. One advantage is that often the parts are easy to multiply. Another advantage is that students are less likely to get tripped up by memorized tricks than with some other methods. Students will move through the problem in an organized way that lets them see where the numbers are coming from.

	324
	<u>x 6</u>
First multiply $6 \times 4 =$	24
Next multiply $6 \times 20 =$	120
Next multiply $6 \times 300 =$	<u>1800</u>
Last, add up the partial products =	1944

$10 \times 10 = 100$	$3 \times 10 = 30$
$2 \times 10 = 20$	$3 \times 2 = 6$



Area Models

Multiplication is used in geometry to calculate the area of a figure. In this unit, students will use base-10 blocks and drawn models to see and understand multi-digit multiplication. These figures represent 12×13 .

Extended Facts

Students will practice solving series of problems using multiples of 10. These will help them operate with larger numbers.

$6 \times 1 = 6$

$6 \times 10 = 60$

$6 \times 100 = 600$

$6 \times 1000 = 6000$

Rich Math Tasks

As with all units in the SFUSD Math Core Curriculum, there are four tasks in this unit that provide a real world context for doing math. A rich math task is part of a balanced approach to mathematics that includes conceptual understanding, problem-solving, and procedural fluency. A rich math task takes time to solve and lends itself to collaboration and multiple perspectives. Most of the math tasks are designed for group or partner work. Examples of the tasks students will engage in in this unit are:

- Looking at the floor plan of a home and using multiplication to understand area.
- Using multiplication and addition to make comparisons about money raised during a walkathon.
- Comparing real world enrollment data from UC Berkeley and UC Davis, and using multiplication to understand increased enrollment



Activities You Can Do to Support Math at Home

Paying Attention to Multiplication In Everyday Life

We use multiplication to help us think about many things in the world. As you encounter these kinds of situations, notice them aloud and think about them with your child.

- A bakery arranges 8 cupcakes in a box. How many boxes would we need to throw a party for the whole class? For the whole school?
- Tennis balls often come in tubes of three. If I want to give tennis balls as gifts to all of my family and friends, how many tubes will I buy? How many balls is that? Is there an easier way to think about those numbers?

Math Notebooks

In the classroom, students use their Math Notebooks regularly to develop their understanding of concepts, and extend that understanding with multiple representations and precise mathematical vocabulary.

As you are noticing situations like the one to the right, encourage your child to write about them, draw them, and describe them with numbers and equations.



Name _____ Date: _____

Math Homework (Entry)

1. Shaunika has 8 pages with 24 stickers per page. How many stickers does Shaunika have all together?

2. Draw two ways to show $\frac{5}{10}$.

3. Find the missing number to complete this tape diagram model.

3,695	18,209
?	

4. Write the number 2,038 in expanded form and in words.

Expanded form:

Word form:

Name _____ Date: _____

Math Homework 4.2 LS1, Day 1

1. Find the sums or differences.

$8,984 + 2,031 =$

$8,984 - 2,031 =$

2. Write the sum:

_____ = 50,000 + 2,000 + 700 + 20 + 9 + .5

3. Write the number 23,042 in expanded form and in word form.

expanded form:

word form:

4. There are 8 packs of gum for sale at Big Mel's store. Safeway has 4 times as many packs of gum for sale as Big Mel's Store. How many packs of gum are for sale at Safeway? Show how you solved this problem.

Name _____ Date: _____

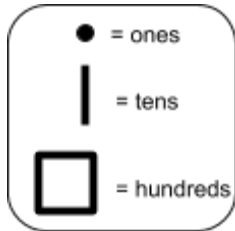
Math Homework 4.2 LS1, Day 2

1. Find the sums or differences using the standard algorithm:

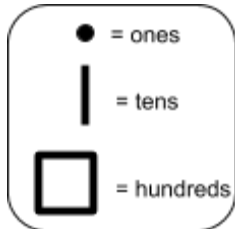
$$23,450 - 8,768 =$$

$$23,450 + 8,768 =$$

2. Draw 27×6 using the base-10 block symbols below.



3. Draw 8×33 using the base-10 block symbols below.



4. Mario has 3750 paper clips. Chi has 2993 paper clips. How many more paper clips does Mario have than Chi?

Name _____ Date: _____

Math Homework 4.2 LS1, Day 3

1. Find the sums and differences using the standard algorithm:

$105,394 - 66,809 =$

$105,394 + 66,809 =$

2. Write this number: three million two hundred five thousand and five tenths.

3. Find the missing number to complete this tape diagram.

3,523	?
9,532	

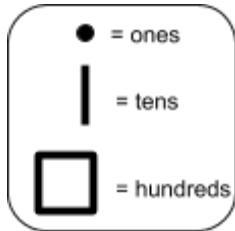
4. Wisdom loves to collect pencils. She has 8 packages of 48 pencils. How many pencils does she have in all? Show how you figured this out.

Name _____ Date: _____

Math Homework 4.2 LS1, Day 4

1. Which is greater: $34,892 - 5,000$ or $14,890 + 15,002$? Justify your reason.

2. Draw 24×4 using the base-10 block symbols below.



3. Find the missing number.

$56 = \underline{\quad} \times 8$

$108 = 9 \times \underline{\quad}$

$\underline{\quad} = 6 \times 8$

$144 = \underline{\quad} \times \underline{\quad}$

4. Glenn has 8 packages of 48 stickers. Emanuel has 6 packs of 64 stickers. Who has more stickers? Justify your reason.

Name _____ Date: _____

Math Homework 4.2 LS1, Day 5

1. Using base-10 block notation, show 18×15 .

2. Find the missing number to complete this tape diagram.

1,562	?
3,718	

3. Find the missing numbers.

$600 = \underline{\quad} \times 6$ $840 = 7 \times \underline{\quad}$ $\underline{\quad} = 40 \times 90$ $100 = \underline{\quad} \times \underline{\quad}$

4. Josue and Leila love to play at the arcade. Their favorite game is virtual bowling where they earn tickets for the points they score. On their last visit, Josue won 35 tickets. Leila had an exceptional day and earned 4 times as many as Josue. How many tickets did Leila earn? Show how you figured this out.

Name _____ Date: _____

Math Homework 4.2 LS1, Day 6

1. Using base-10 block notation, show 28×13 .

2. The populations of five cities in California are listed below. What is the combined population of San Diego and Fresno?

City	Population
Los Angeles	3,928,864
San Diego	1,381,069
San Jose	1,015,785
San Francisco	852,469
Fresno	515,986

3. Follow the pattern and find the missing numbers.

218,996	_____	218,998	218,999	_____	_____
---------	-------	---------	---------	-------	-------

4. Angela and Elisa are playing a game of basketball. Angela scored 19 points. Elisa scored twice as many points as Angela did. How many points did Elisa and Angela score all together? Show how you figured this out.

Name: _____ Date: _____

Math Homework (4.2 Apprentice)

1. Write the number 198,372 in word form and in expanded form.

Word form: _____

Expanded form: _____

2. Write $<$, $>$, or $=$.

0.23 _____ 0.2 7.5 _____ 0.75

3. Monica is in charge of ordering the school prizes. She needs to order 8,900 school note pads. So far, she has ordered 3,400 from one store and 1,050 from another store. How many more school note pads does she need to order? Show your work.

4. Solve the following problems:

a. $70 \times 30 =$ _____

b. $600 \times 300 =$ _____

c. $400 \times$ _____ $= 120,000$

d. _____ $\times 100 =$ _____

Name _____ Date: _____

Math Homework 4.2 LS2, Day 1

1. Which is greater: $75,409 - 6,000$ or $29,300 + 40,109$. Justify your reason.

2. Puppy weighs 8 pounds. Her mother weighs 12 times as much. How much does her mother weigh? Justify your reason.

3. One pound is equal to 16 ounces. How many ounces is 12 pounds? Show your work.

4. Round the number 39,944 to the nearest hundred.



Name _____ Date: _____

Math Homework 4.2 LS2, Day 2

1. Multiply $27 \cdot 18$.

2. What is 15 times as much as \$15?

3. What's the missing number?

$600 \times \underline{\quad} = 36,000$

$\underline{\quad} \times 80 = 4,000$

$72,000 = \underline{\quad} \times \underline{\quad}$

4. Michelle walked 98,094 steps this week. Her best friend Nadia, walked 15,947 steps more than Michelle. How many steps did Nadia walk this week? Show how you solved this problem.

Name _____ Date: _____

Math Homework 4.2 LS2, Day 3

1. A 1,200-pound horse eats about six times its own weight each year. How much does it eat? Use a tape diagram to show your reasoning.

2. What is the product of $45 \cdot 39$? Find the product by using the box method. Show your work below.

3. Follow the pattern and find the missing numbers.

4,107; 4,111; 4,115; 4,119; _____; _____; _____

4. Round the number 672,482 to the nearest ten thousand.



Name _____ Date: _____

Math Homework 4.2 LS2, Day 4

1. One yard is equal to 36 inches. How many inches are 15 yards? Show your work.

2. What's the product of $35 \cdot 47$? Solve this using the box method.

3. Chameleon fact: A chameleon's tongue is twice the length of its body.
If my pet chameleon, Soshomaru, is 26 inches long, how long should his tongue be? Use a tape diagram to solve this problem.

4. Round the number 5,997 to the nearest hundred.



Name _____ Date: _____

Math Homework 4.2 LS2, Day 5

1. There are 60 seconds in one minute. How many seconds are there in one half hour?
Show your work.

2. What's the product of $25 \cdot 41$? Solve this using the box method.

3. Glenn is 3 times as tall as his son. His son is 42 inches tall. How tall is Glenn?

4. Round the number 1,255 to the nearest hundred.



Name: _____ Date: _____

Math Homework (4.2 Expert)

1. What was the difference between the population of Fresno, California (515,986) and Los Angeles, California (3,928,864) in 2014? Show your work on an open number line.



2. Use a standard algorithm to solve Problem 1. Show your work.

3. Write the populations of Fresno, California and Los Angeles, California each in expanded form.

Fresno:

Los Angeles:

4. Write the missing numbers.

a. $70 \times \underline{\hspace{2cm}} = 49,000$

c. $24,000 = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$

b. $360,000 = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$

d. $160,000 = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$

Name _____ Date: _____

Math Homework 4.2 LS3, Day 1

1. Emanuel earned \$120 cutting lawns last month. That was 6 times as much money as he earned the previous month. How much money did he earn the previous month?

2. a. $24 \times 6 =$ _____ b. $18 \times 8 =$ _____ c. $40 \times 53 =$ _____

3. Multiply.

$62 \cdot 44$

4. Round the number 99,853 to the highest place value.



Name _____ Date: _____

Math Homework 4.2 LS3 Day 2

1. Show where you would place the following numbers on the vertical number line if you were rounding to the nearest **thousand** labeling the appropriate endpoints and midpoints.

85,805



69,005



2. Round the following numbers to the **nearest 10 thousand**:

744,271: _____

949,664 : _____

3. One mile is equal to 5,280 feet. How many feet are there in 9 miles? Show your work.

4. There are 365 days in a standard year. How many days are there in 6 standard years?

Name _____ Date: _____

Math Homework 4.2 LS3 Day 3

1. Find the product: $82 \cdot 13$. Solve using either the partial products or the box method.

2. Round the following numbers to the **nearest 10 thousand**:

990,201: _____

159,994 : _____

3. Building A is 20 feet tall. Building B is 7 times as tall. Use a tape diagram to show how tall Building B is.

4. Write the missing numbers.

a. $25 \times \underline{\hspace{2cm}} = 7,500$

c. $84,000 = \underline{\hspace{2cm}} \times 120$

b. $43 \times 81 = \underline{\hspace{2cm}}$

d. $1,200,000 = 6,000 \times \underline{\hspace{2cm}}$

Math Homework LS2 Day 4

1. Show where would you place the following numbers on the vertical number line if you were rounding to the nearest **thousand** labeling the appropriate endpoints and midpoints.

74,875



169,547



2. Round the following numbers to the **nearest ten thousand**:

609,271: _____

322,664 : _____

3. One meter is equal to 100 centimeters. How many centimeters are there in 15 meters? Show your work.

4. Sequoia School has 65 4th grade students. Redwood School has 4 times as many 4th grade students. How many 4th grader does Redwood School have? Show your work.

Name _____ Date: _____

Math Homework 4.2 LS3 Day 5

1. An oak tree is 26 feet tall. A sequoia tree is 6 times as tall. How tall the sequoia tree?

2. Round 835,009 to the nearest thousand using the number line provided.



3. Ms. Chai was born on November 23, 1974. How old is she now? Show how you solved this problem.

4. Solve.

$8 \times \underline{\quad} = 56$

$9 \times \underline{\quad} = 99$

$72 = \underline{\quad} \times \underline{\quad}$

$36 = 6 \times \underline{\quad}$

$82 = \underline{\quad} \times \underline{\quad}$

4.2 LS3 Day 6 Homework

1. Find the product: $64 \cdot 29$. Solve using either the partial products or the box method.

2. Round the following numbers to the **nearest 10 thousand**:

292,331: _____

648,100 : _____

3. Sequoia Elementary School has 28 classrooms. 17 of those classrooms are kindergarten through 3rd grade. The rest are 4th or 5th grades. Each kindergarten through 3rd grade class has 22 students. Each 4th and 5th grade class has 29 students. How many students are in the school altogether?

4. Write the missing numbers.

a. $50 \times \underline{\hspace{2cm}} = 8,600$

c. $22,000 = \underline{\hspace{2cm}} \times 22$

b. $29 \times 52 = \underline{\hspace{2cm}}$

d. $3,500,000 = 7,000 \times \underline{\hspace{2cm}}$

Name: _____ Date: _____

Math Homework (4.2 Milestone)

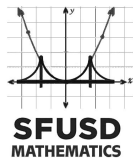
1. Think about the Milestone Task you worked on about the San Francisco Tour Group. What is something you did particularly well and why?

2. On the same Milestone Task, what was one thing you were unsure about and why?

3. Before the quinceañera party began, there were 12 people in the dance hall. When everyone arrived, there were 15 times as many people at the party. How many people were at the party? Show your work/

4. Round 984.62 to the nearest ten..



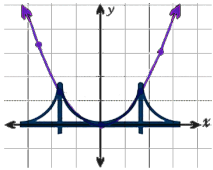


SFUSD Math Core Curriculum

Unit 4.3 Whole Number Division

Homework





SFUSD
MATHEMATICS

Fourth Grade Family Letter

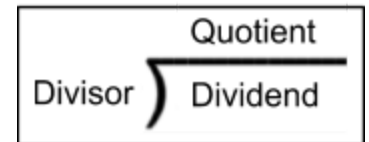
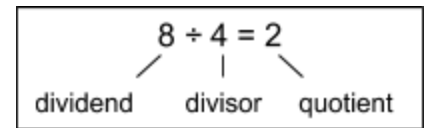
Unit 3: Whole Number Division

Multiplication and division are related operations. In this unit, fourth graders take what they have learned about multiplication and apply it to division, developing a deep understanding of what division is and how and when to use it. Unit 4.3 covers division of whole numbers of up to 4 digits by 1 digit, or numbers in the thousands place divided by numbers in the ones place.

Special Words and Ideas in Division

There are special names for the parts of a division problem.

- The dividend is the part being divided.
- The divisor is what it is being divided by.
- The quotient is the result.



There are two basic types of division problems.

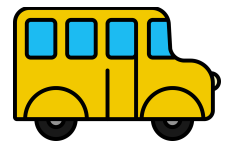
- A partitive division problem asks, “How many in each group?”
- A quotative division problem asks, “How many groups are there?”

Remainders

A remainder is the part left over after two numbers have been divided if they don't divide evenly. Students need to think about what a question is asking before they decide what a remainder might mean. Here are some examples that show how important the context is, with each situation involving 60 divided by 40. $60 \div 40 = 1$ with 20 left over. What happens to the 20 that are left?

1. **The after school soccer team is taking a bus to their game. Each bus seats 40 students, and 60 students will attend. How many buses are needed?**

60 ÷ 40 = 1 with 20 left over. Does it make sense to take 1 bus and leave 20 students behind? Or to cut a bus in half for the 20 students who are left? No, neither of those is a reasonable idea since every student needs a seat and you can't cut a bus in half. We will need to take 2 buses to seat 60 students. There will be some extra room on the buses.



2. **The after school soccer team has t-shirts with the school logo. There are 40 students sharing 60 t-shirts. How many t-shirts will each student get?**

60 ÷ 40 = 1 with 20 left over. Does it make sense for each student to wear 1 t-shirt and then share what's left? No, that is not a reasonable idea, since each student would wear only 1 t-shirt, and we wouldn't cut up the remaining t-shirts to share them evenly. We will need 40 t-shirts for 40 students, with 20 left over.



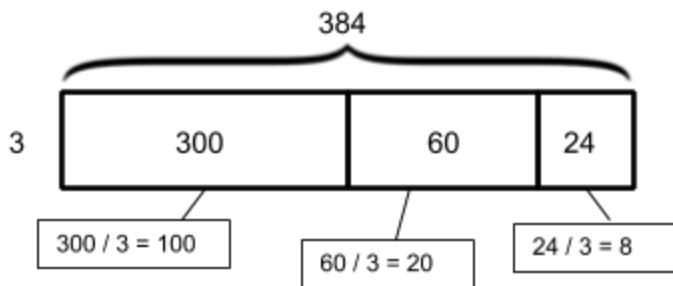
3. **After the game, the players eat a snack. There are 60 apples for the 40 players. How many apples will each player get?**

60 ÷ 40 = 1 with 20 left over. What do we do with the leftover 20 apples? Since apples can be cut in half, we can cut the 20 leftover apples into 40 halves. Each student will get 1½ apples.



Division, Arrays, and Area

Arrays continue to be a very helpful model for working with multiplication and division. In the model to the right, the problem $384 \div 3$ is easier to work with if you break 384 into smaller pieces. There are several ways to decompose the larger number. This sample shows 300, 60, and 24, which are all numbers that are easy to divide by 3.



Multi-Digit Division

Thinking of division as it relates to area helps students understand the **Partial quotient** division strategy. This strategy is based on the same idea as the array above: Bigger numbers can be broken up into friendly numbers, and those numbers can be divided. Students track the parts along the way, then add them back together. Students move through the problem in an organized way that lets them see where the numbers are coming from.

$\begin{array}{r} 3 \overline{) 384} \\ - 300 \quad 100 \\ \hline 84 \\ - 60 \quad 20 \\ \hline 24 \\ - 24 \quad + 8 \\ \hline 0 \quad 128 \end{array}$	<p>At each step, a student is thinking about a number that is easy to divide, and keeping track as they go. They add the partial quotients at the end.</p>
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Activities You Can Do to Support Math at Home

Helping Your Child with Homework

The Standards for Mathematical Practice describe the ways students behave as they learn math. While the mathematics content changes from grade to grade, these standards are the same for kindergarten through high school. Mathematical Practice Standard 8 says: **Look for and express regularity in repeated reasoning**. So much of what 4th graders do to make sense of the base-ten number system falls within this standard.

One great example of this is when we practice with a series of problems using multiples of 10. Students recognize certain features of our number system, and start to generalize things that will always be true.

$6 \times 1 = 6$

$6 \times 10 = 60$

$6 \times 100 = 600$

$6 \times 1000 = 6000$

$60 \times 1 = 60$

$60 \times 10 = 600$

$600 \times 10 = 6000$

$60 \times 100 = 6000$

You can help your child make generalizations by asking them what patterns they see. These are some questions and prompts that will help students make generalizations:

- What shortcut can you think of that will always work for these kinds of problems?
- Why does it work?
- What pattern(s) do you see?
- Can you make a rule or generalization?

Name _____

Date _____



3-Read Homework 4.3 Entry Task

Situation: Elizabeth and Herman are collecting aluminum cans for a fundraiser at their school. Elizabeth was able to collect 50 cans each day from Monday to Friday. Herman was able to collect double that amount each day except Friday, when he collected none. Each can is worth 2 cents.

1. What is this situation about?

2. What are the quantities in this situation?

3. What mathematical questions could we ask?

4. Answer one of your questions!

Name _____ Date: _____

Math Homework (4.3 LS1 Day 1)

1. Michelle bought 30 marbles at the flea market. She wants to put them into little bags with 6 marbles in each bag. How many bags will she need? Show how you found your answer.

2. 24 fourth graders are going on a field trip to the Academy of Science. They need to form 3 groups of students for the tour guides. How many students will be in each group? Show how you found your answer.

3. List all the pairs of whole numbers that multiply together to create the product 120. How do you know when you have listed them all?

4. Find the products.

a. $12 \times 27 =$

b. $45 \times 45 =$

Name _____ Date: _____

Math Homework (4.3 LS1 Day 2)

1. Shade all the numbers that are divisible by 2 and by 3 in this multiplication table.

×	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
3	3	6	9	12	15	18	21	24	27
4	4	8	12	16	20	24	28	32	36
5	5	10	15	20	25	30	35	40	45
6	6	12	18	24	30	36	42	48	54
7	7	14	21	28	35	42	49	56	63
8	8	16	24	32	40	48	56	64	72
9	9	18	27	36	45	54	63	72	81

2. A seagull ate exactly 12 anchovies every day for one week. How many anchovies did it eat in all? Show how you found your answer.

3. Are there more even numbers or more odd numbers in the multiplication chart in question 1? Why?

4. Find the quotients.

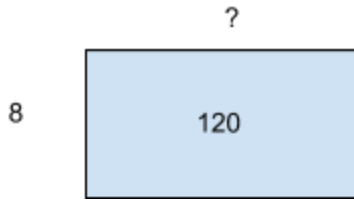
a. $34 \div 2 =$

b. $125 \div 5 =$

Name _____ Date: _____

Math Homework (4.3 LS1 Day 3)

1. Find the missing dimension. Show how you found the answer.



2. Santos has to divide 65 apples into bags. How many apples will there be in each bag? Show how you found the answer.

3. List all the pairs of whole numbers that multiply together to create the product 200.

4. Find the answers and show how you did them.

a. $52 \times 123 =$

b. $345 \div 5 =$

Name _____ Date: _____

Math Homework (4.3 LS1 Day 4)

1. Write a word problem for this expression: $125 \times 12 = \underline{\quad}$. Show how to solve it.

2. Victor bought several boxes of books at a yard sale and ended up with fourteen books total. If each box had seven books, how many boxes did he buy?

3. Find the sum.

a. $12,495 + 4,012$

b. $88,489 + 22,511$

4. Find the quotient.

a. $84 \div 4 =$

b. $184 \div 4 =$

Was there something you knew from the first problem that helped you solve the second one?

Name _____ Date: _____

Math Homework (4.3 LS1 Day 5)

Read the situation below. Think of three questions you could ask to make this into an interesting math problem. Answer one of your questions.

Timothy and Kathy are planning a party together. They go to the Party Store to see what the supplies will cost. They see that paper plates come in a variety of package sizes and costs. For example, packages with 10 plates cost \$2.50. Packages of 50 plates cost \$7.50. Packages of 200 plates cost \$20.

Name _____ Date: _____

Math Homework (Apprentice Task)

1. List all the prime numbers you know between 1 and 50.

2. Roberto earns \$48 each weekend working as a babysitter. How much money can he earn in one month? How much can he earn in a year?

3. A cereal box has 18 cups of cereal. Each serving is 2 cups. How many servings are in the box?

4. Find the quotients.

a. $75 \div 5 =$

b. $120 \div 6 =$

Name _____ Date: _____

Math Homework (4.3 LS2 Day 1)

1. At the school cafeteria, each student who ordered lunch gets 6 chicken nuggets. The cafeteria staff prepares for 300 students. How many chicken nuggets does the cafeteria prepare altogether?

2. Jaylene has thirty times as many stickers as her brother. Her brother has 8 stickers. How many stickers does Jaylene have?

3. Find the sums.

a. $45,340 + 7,500$

b. $15,000 + 25,000$

4. Find the quotients.

a. $384 \div 4 =$

b. $185 \div 5 =$

Name _____ Date: _____

Math Homework (4.3 LS2 Day 2)

Daniel went to the lumber store to buy wood for a shed he is building. He bought 15 pieces of plywood. Each piece of plywood measured 4 ft by 8 ft. He paid \$75 for the plywood.

What is this situation about?

What are the quantities of this situation and how are they related?

What are two questions you could ask about this situation that makes this into a math problem?

Choose one of your questions and answer it.

Name _____ Date: _____

Math Homework (4.3 LS2 Day 3)

1. To print a comic book, 50 pieces of paper are needed. How many pieces of paper are needed to print 45 comic books?

2. Find the products.

a. $4 \cdot 513$

b. $3 \cdot 1,054$

3. Every day, Penelope jogs three laps around the playground to keep in shape. The playground is rectangular with a width of 163 meters and a length of 320 meters. How many meters does Penelope jog each day?

4. A small bag of chips weighs 48 g. A large bag of chips weighs three times as much as the small bag. How much will 7 large bags of chips weigh?

Name _____ Date: _____

Math Homework (4.3 LS2 Day 4)

1. Isabel earned 350 points while she was playing Blastin' Robot. Isabel's mother earned 3 times as many points as Isabel. How many points did Isabel's mother earn?

2. Find the quotients.

a. $575 \div 5$

b. $1,054 \div 4$

3. Mr. May wants to order 4 iPads for his classroom. Each iPad costs \$425. How much will all four iPads cost?

4. Find the product.

a. $6 \cdot 431$

b. $3 \cdot 3,106$

Name _____ Date: _____

Math Homework (4.3 LS2 Day 5)

1. There are 365 days in a common year. How many days are there in 3 common years?

2. Find the products.

a. $14 \cdot 763$

b. $63 \cdot 402$

3. The length of one side of a square city block is 462 meters. What is the length of the perimeter of a square city block?

4. Jake ran 2 miles. Jesse ran 4 times as many miles. There are 5,280 feet in one mile. How many feet did Jesse run?

Name _____ Date: _____

Math Homework (Expert Task)

1. The cruising speed of a Boeing 747 is 570 miles per hour. About how many mile will it travel in 8 hours?

2. María spends \$5 each day to buy lunch. How much does she spend in 20 days?

3. Calculators come in boxes of 24. A school orders 12 boxes. How many calculators will the school get?

4. Find the quotient.

a. $96 \div 3 =$

b. $224 \div 4 =$

Name _____ Date: _____

Math Homework (4.3 LS3 Day 1)

1. There are 365 days in a year. How many days are there in 9 years?

2. Find the products.

a. $6 \cdot 2,348$

b. $1,679 \cdot 7$

3. It takes 687 Earth days for the planet Mars to revolve around the Sun once. How many Earth days does it take Mars to revolve around the Sun four times?

4. The library has 57 chairs and 10 tables. If the same number of chairs is placed at each table, how many chairs can be placed at each table? Will there be extra chairs? If so, how many?

Name _____ Date: _____

Math Homework (4.3 LS3 Day 2)

1. The baker has 42 kilograms of flour. She uses 8 kilograms each day. After how many days will she need to buy more flour?

2. Find the products.

a. $37 \cdot 703$

b. $73 \cdot 922$

3. Caleb has 76 apples. He wants to bake as many pies as he can. If it takes 8 apples to make one pie, how many apples will he use? How many apples will not be used?

4. Forty-five people are going to the beach. Seven people can ride in each van. How many vans will be required to get everyone to the beach?

Name _____ Date: _____

Math Homework (4.3 LS3 Day 3)

1. Linda makes booklets using 5 sheets of paper. She has 75 sheets of paper. How many booklets can she make?

2. Find the quotients.

a. $144 \div 4$

b. $872 \div 20$

3. Mr. Lee wants to put his 29 students into groups of four. How many groups can he make? Will there be students left over?

4. Tomás give his horse a container with 57 gallons of water. If his horse drinks 7 gallons of water each day, for about how many days will his horse have water before he needs to refill the container?

Name _____ Date: _____

Math Homework (4.3 LS3 Day 4)

1. There are two friends who share \$56. They have 5 ten dollar bills and 6 dollar bills. Draw a picture to show how the bills will be shared. Will they have to make change?

2. Find the quotients.

a. $939 \div 3$

b. $603 \div 3$

3. María's photo album has a total of 97 pictures. Each page holds 6 pictures. How many pages of photos does María's album have?

4. Write all the factor pairs of 120.

Name _____ Date: _____

Math Homework (4.3 LS3 Day 5)

1. A pile of sand weighs 2,800 kilograms. It is divided between 4 trucks. How many kilograms of sand are in each truck?

2. Find the quotients.

a. $905 \div 5$

b. $824 \div 4$

3. Emanuel has 5 times as many stickers as Adrián has. Emanuel has 350 stickers. How many stickers does Adrián have?

4. An ice cream stand sold \$1,600 worth of ice cream on Saturday, which was 4 times the amount sold on Friday. How much money did the ice cream stand collect on Friday?

Name: _____ Date: _____

Math Homework 4.3 - Milestone

1. Think about the Milestone Task you worked on about Holiday Field Trip. What is something you feel you did particularly well and why?

2. On the same Milestone Task, what was one thing you were unsure about and why?

3. Barbara buys 6 American Girl dolls from a catalog. The total cost of buying them was \$156. Show with a diagram and with numbers how much each doll cost.

4. Round 87,045 to the nearest thousands place.



