

Dear Family,

During the next few weeks, our math class will be learning to estimate and solve addition and subtraction problems using numbers through hundreds.

You can expect to see homework that provides practice with adding and subtracting numbers as well as estimating sums and differences.

Here is a sample of how your child will be taught to estimate sums.

Vocabulary

estimate A number close to an exact amount

compatible numbers Numbers that are easy to compute mentally and are close to the real numbers

MODEL Estimate Sums

These are two methods we will be using to estimate sums.

$$367 + 512 = \blacksquare$$

Use rounding.

STEP 1	STEP 2	S 1
Round each	Add the	Fi
number to	rounded	cc
the nearest	numbers.	ทเ
hundred.		ea
$367 \rightarrow 400$	400	
$+$ 512 \rightarrow 500	<u>+ 500</u>	<u> </u>
	000	

Use compatible numbers.

STEP 1	STEP 2
Find a	Add the
compatible	numbers
number for	mentally.
each addend.	
$105 \rightarrow 100$	100
$+$ 362 \rightarrow 400	<u>+ 400</u>
	500

Choosing Compatible Numbers to Estimate Sums and Differences

A number may have more than one compatible number. For example, a compatible number for 362 could be 350 or 400. Whichever numbers are easiest to add or subtract mentally are the best ones to use for estimations.

Activity

Provide books with large numbers of pages (3-digit numbers). Have your child use rounding and compatible numbers to estimate the total number of pages in the two books and compare how many more pages one book has than the other.



Querida familia.

Durante las próximas semanas, en la clase de matemáticas aprenderemos a estimar y resolver problemas de suma y resta usando números hasta las centenas.

Llévare a la casa tareas con actividades para practicar la suma y la resta, y para estimar sumas y diferencias.

Este es un ejemplo de la manera como aprenderemos a estimar sumas.

Vocabulario

estimación Un número que se aproxima a una cantidad exacta

números compatibles Números con los que es fácil calcular mentalmente y que se aproximan a los números reales

MODELO Estimar sumas

Estos son dos métodos que usaremos para estimar sumas.

 $367 + 512 = \blacksquare$

Usa el redondeo.

PASO 1	PASO 2
Redondea cada número a la centena más cercana.	Suma los números que hallaste.
$367 \rightarrow 400$ $+ 512 \rightarrow 500$	400 + 500 900

Usa números compatibles.

PASO 1	PASO 2
Halla	Suma los
un número	números
compatible para	mental-
cada sumando.	mente.
$105 \rightarrow 100$	100
$+ 362 \rightarrow 400$	<u>+ 400</u>
	500

Elegir números compatibles para estimar sumas y restas

Un número puede tener más de un número compatible. Por ejemplo, un número compatible para 362 puede ser 350 o 400. Cualquiera de los números con el que sea más fácil sumar y restar mentalmente sirve para hacer estimaciones.

Actividad

Dé a su hijo o hija dos libros que tengan bastantes páginas (con números de 3 dígitos). Pídale que use el redondeo y los números compatibles para estimar el total de páginas de los dos libros y para averiguar cuántas más páginas tiene un libro que el otro.

ALGEBRA Lesson 1.1

Number Patterns

COMMON CORE STANDARD—3.OA.9 Solve problems involving the four operations,

and identify and explain patterns in arithmetic.

Find the sum. Then use the Commutative Property of Addition to write the related addition sentence.

$$+$$
 2 = 11 4. 3 + 10 = $-$ 7. 8 + 9 = $-$

$$2 + 9 = 11$$

$$4 + 7 =$$
 5. $6 + 7 =$ **8.** $0 + 4 =$ **...**

$$0 + 4 =$$

$$3 + 6 =$$
 6. $7 + 5 =$ **9.** $9 + 6 =$

$$9 + 6 =$$

Is the sum even or odd? Write even or odd.

Problem Solving



- **16.** Ada writes 10 + 8 = 18 on the board. Maria wants to use the Commutative Property of Addition to rewrite Ada's addition sentence. What number sentence should Maria write?
- 17. Jackson says he has an odd number of model cars. He has 6 cars on one shelf and 8 cars on another shelf. Is Jackson correct? Explain.

Lesson Check (3.OA.9)

- **1.** Marvella writes the addition problem 5 + 6. Is this sum even or odd?
- **2.** What related number sentence shows the Commutative Property of Addition?

$$3 + 9 = 12$$

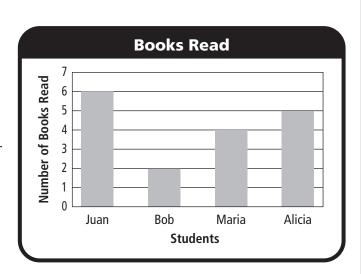
Spiral Review (Reviews 2.MD.3, 2.MD.8, 2.MD.10)

- 3. Amber has 2 quarters, 1 dime, and 3 pennies. How much money does Amber have?
- **4.** Josh estimates the height of his desk. What is a reasonable estimate?

Use the bar graph for 5-6.

5. Who read the most books?

6. Who read 3 more books than Bob?



Round to the Negrest Ten or Hundred



COMMON CORE STANDARD—3.NBT.1 Use place value understanding and properties of operations to perform multi-digit arithmetic.

Locate and label 739 on the number line. Round to the nearest hundred.



- **1.** 739 is between **700** and **800**.
- **2.** 739 is closer to _____ than it is to ____.
- **3.** 739 rounded to the nearest hundred is _____.

Round to the nearest ten and hundred.

- **4.** 363
- **5.** 829
- **6.** 572

- **7.** 209
- **8.** 663
- **9.** 949

- **10.** 762 _____
- **11.** 399 _____
- **12.** 402 _____

Problem Solving



- 13. The baby elephant weighs 435 pounds. What is its weight rounded to the nearest hundred pounds?
- 14. Jayce sold 218 cups of lemonade at his lemonade stand. What is 218 rounded to the nearest ten?

- 1. One day, 758 people visited the Monkey House at the zoo. What is 758 rounded to the nearest hundred?
- 2. Sami ordered 132 dresses for her store. What is 132 rounded to the nearest ten?

Spiral Review (Reviews 2.G.1, 2.G.3; 3.OA.9)

3. What property describes the number **4.** Is the sum even or odd? sentence?

$$6 + 0 = 6$$

$$2 + 6$$

5. What name describes this shape?



6. What word describes the equal shares of the shape?



Estimate Sums

Use rounding or compatible numbers to estimate the sum.

Problem Solving (W



- **12.** Stephanie read 72 pages on Sunday and 83 pages on Monday. About how many pages did Stephanie read during the two days?
- 13. Matt biked 345 miles last month.

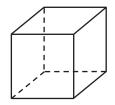
 This month he has biked 107 miles.

 Altogether, about how many miles has Matt biked last month and this month?

- The McBrides drove 317 miles on one day and 289 miles on the next day. Estimate the number of miles the McBrides drove during the two days.
- 2. Ryan counted 63 birds in his backyard last week. This week, he counted 71 birds in his backyard. About how many birds did Ryan count?

Spiral Review (Reviews 2.G.1; 3.NBT.1, 3.OA.9)

3. What name describes this shape?



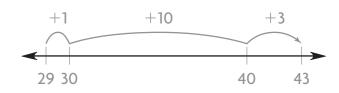
4. Is the sum even or odd?

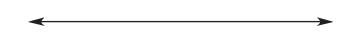
6 + 7

- **5.** What is 503 rounded to the nearest hundred?
- **6.** What is 645 rounded to the nearest ten?

Mental Math Strategies for Addition

Count by tens and ones to find the sum. Use the number line to show your thinking.







Use mental math to find the sum. Draw or describe the strategy you use.

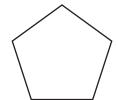
Problem Solving (Red)

- 7. Shelley spent 17 minutes washing the dishes. She spent 38 minutes cleaning her room. **Explain** how you can use mental math to find how long Shelley spent on the two tasks.
- 8. It took Marty 42 minutes to write a book report. Then he spent 18 minutes correcting his report.Explain how you can use mental math to find how long Marty spent on his book report.

- 1. Sylvia spent 36¢ for a pencil and 55¢ for a notepad. Use mental math to find how much she spent.
- 2. Will spent 24 minutes putting together a model plane. Then he spent 48 minutes painting the model. How long did Will spend working on the model plane?

Spiral Review (Reviews 2.G.1, 2.G.3; 3.OA.9, 3.NBT.1)

3. What name describes this shape?



4. What word describes the equal shares of the shape?



- **5.** Tammy wrote the addition problem 5 + 6. Is this sum even or odd?
- **6.** Greg counted 83 cars and 38 trucks in the mall parking lot. Estimate the total number of cars and trucks Greg counted.

Use Properties to Add

COMMON CORE STANDARD—3.NBT.2Use place value understanding and properties of operations to perform multi-digit arithmetic.

Use addition properties and strategies to find the sum.

1.
$$34 + 62 + 51 + 46 = 193$$

$$\begin{array}{r}
 34 > 10 \\
 46 \\
 62 \\
 \hline
 193
\end{array}$$

3.
$$42 + 36 + 18 =$$

5.
$$41 + 26 + 149 =$$

6.
$$52 + 64 + 28 + 44 =$$

Problem Solving Real World

- 7. A pet shelter has 26 dogs, 37 cats, and 14 gerbils. How many of these animals are in the pet shelter in all?
- 8. The pet shelter bought 85 pounds of dog food, 50 pounds of cat food, and 15 pounds of gerbil food. How many pounds of animal food did the pet shelter buy?

- 1. At summer camp there are 52 boys, 47 girls, and 18 adults. How many people are at summer camp?
- 2. At camp, 32 children are swimming, 25 are fishing, and 28 are canoeing. How many children are swimming, fishing, or canoeing?

Spiral Review (Reviews 2.MD.3; 3.NBT.1)

- **3.** Hank estimated the width of the door to his classroom in feet. What is a reasonable estimate?
- **4.** Garth estimated the height of the door to his classroom in meters. What is a reasonable estimate?

- **5.** Jeff's dog weighs 76 pounds. What is the dog's weight rounded to the nearest ten pounds?
- 6. Ms. Kirk drove 164 miles in the morning and 219 miles in the afternoon. Estimate the total number of miles she drove that day.

Use the Break Apart Strategy to Add



Estimate. Then use the break apart strategy to find the sum.

1. Estimate: 800

2. Estimate:

$$518 = + 372 =$$

3. Estimate: _____

$$473 = + 123 =$$

4. Estimate: _____

$$208 = + 569 =$$

5. Estimate: _____

$$731 = + 207 =$$

6. Estimate: _____

$$495 = + 254 =$$

Problem Solving (Real World)

Use the table for 7-8.

7. Laura is making a building using Set A and Set C. How many blocks can she use in her building?

Build-It Blocks		
Set	Number of Blocks	
А	165	
В	188	
С	245	

8. Clark is making a building using Set B and Set C. How many blocks can he use in his building?

- 1. Arthur read two books last week. One book has 216 pages. The other book has 327 pages. Altogether, how many pages are in the two books?
- 2. One skeleton in a museum has 189 bones. Another skeleton has 232 bones. How many bones are in the two skeletons?

Spiral Review (Reviews 2.MD.8, 3.OA.9, 3.NBT.2)

- 3. Culver has 1 quarter, 3 dimes, and 1 penny. How much money does he have?
- **4.** Felicia has 34 quarters, 25 dimes, and 36 pennies. How many coins does Felicia have?

- 5. Jonas wrote 9 + 8 = 17. What number sentence shows the Commutative Property of Addition?
- **6.** At Kennedy School there are 37 girls and 36 boys in the third grade. How many students are in the third grade at Kennedy School?

Use Place Value to Add

Estimate. Then find the sum.

6. Estimate:

7. Estimate:

8. Estimate:

9. Estimate: _____

10. Estimate: _____

Problem Solving

- **13.** Mark has 215 baseball cards. Emily has 454 baseball cards. How many baseball cards do Mark and Emily have altogether?
- 14. Jason has 330 pennies. Richie has 268 pennies. Rachel has 381 pennies. Which two students have more than 700 pennies combined?

- 1. There are 167 students in the third grade. The same number of students is in the fourth grade. How many third graders and fourth graders are there?
- 2. Jamal read a book with 128 pages. Then he read a book with 179 pages. How many pages did Jamal read?

Spiral Review (3.NBT.1, 3.NBT.2)

- 3. Adam travels 248 miles on Monday. He travels 167 miles on Tuesday. Estimate the total number of miles Adam travels.
- **4.** Wes made \$14, \$62, \$40, and \$36 mowing lawns. How much did he make mowing lawns?

- 5. There are 24 students in Mrs. Cole's class and 19 students in Mr. Garmen's class. How many students are in the two classes?
- **6.** There were 475 children at the baseball game on Sunday. What is 475 rounded to the nearest ten?

Estimate Differences

COMMON CORE STANDARD—3.NBT.1Use place value understanding and properties of operations to perform multi-digit arithmetic.

Use rounding or compatible numbers to estimate the difference.

Problem Solving Real

- **12.** Ben has a collection of 812 stamps. He gives his brother 345 stamps. About how many stamps does Ben have left?
- 13. Savannah's bakery sold 284 loaves of bread in September. In October the bakery sold 89 loaves. About how many more loaves of bread did Savannah's bakery sell in September than in October?

- 1. Jorge has 708 baseball cards and 394 basketball cards. About how many more baseball cards than basketball cards does Jorge have?
- 2. Danika is making necklaces. She has 512 silver beads and 278 blue beads. About how many more silver than blue beads does Danika have?

Spiral Review (3.NBT.1, 3.NBT.2)

- 3. A store manager ordered 402 baseball caps and 122 ski caps. Estimate the total number of caps the manager ordered.
- **4.** Autumn collected 129 seashells at the beach. What is 129 rounded to the nearest ten?

5. Find the sum.

585 + 346 **6.** Julie made \$22, \$55, \$38, and \$25 babysitting. How much did she make babysitting?

Mental Math Strategies for Subtraction

Use mental math to find the difference. Draw or describe the strategy you use.

1.
$$74 - 39 = 35$$

$$-5 - 4 - 10 - 10 - 10$$

$$35 40 44 54 64 74$$

5.
$$357 - 214 =$$

6.
$$285 - 99 =$$

Problem Solving Real World

- 7. Ruby has 78 books. Thirty-one of the books are on shelves. The rest are still packed in boxes. How many of Ruby's books are still in boxes?
- **8.** Kyle has 130 pins in his collection. He has 76 of the pins displayed on his wall. The rest are in a drawer. How many of Kyle's pins are in a drawer?

- 1. One day, a baker made 54 fruit pies. At the end of the day, only 9 of the pies were NOT sold. How many pies were sold that day?
- 2. George's father bought a 50-pound bag of wild bird seed. At the end of two weeks, 36 pounds of seed were left in the bag. How many pounds of seed had been used?

Spiral Review (3.NBT.1, 3.NBT.2)

- 3. For a party, Shaun blew up 36 red balloons, 28 white balloons, and 24 blue balloons. How many total balloons did he blow up?
- **4.** Tiffany has read 115 pages of her book. She has 152 pages left to read. How many pages are in the book?

- 5. The flower shop had 568 flowers on Monday. By Tuesday, the shop had 159 flowers left. About how many flowers had been sold?
- 6. There are 383 books in one section of the school library. Of the books, 165 are fiction books. Estimate the number of books in that section that are NOT fiction.

Use Place Value to Subtract



Estimate. Then find the difference.

6. Estimate: _

7. Estimate: _

Problem Solving

9. Estimate:

10. Estimate:

11. Estimate:

13. Mrs. Cohen has 427 buttons. She uses 195 buttons to make puppets.

- How many buttons does Mrs. Cohen have left?
- 14. There were 625 ears of corn and 247 tomatoes sold at a farm stand. How many more ears of corn were sold than tomatoes?

- 1. On Saturday, 453 people go to a school play. On Sunday, 294 people go to the play. How many more people go to the play on Saturday?
- **2.** Corey has 510 marbles. He fills one jar with 165 marbles. How many of Corey's marbles are NOT in the jar?

Spiral Review (3.NBT.1, 3.NBT.2)

- 3. Pattie brought 64 peppers to sell at the farmers' market. There were 12 peppers left at the end of the day. How many peppers did Pattie sell?
- **4.** An airplane flies 617 miles in the morning. Then it flies 385 miles in the afternoon. About how many more miles does the airplane fly in the morning?

5. What is the unknown number?

$$(\square + 4) + 59 = 70$$

6. Dexter has 128 shells. He needs 283 more shells for his art project. How many shells will Dexter use for his art project?

Combine Place Values to Subtract

Estimate. Then find the difference.

Problem Solving



- **13**. Bev scored 540 points. This was 158 points more than Ike scored. How many points did Ike score?
- 14. A youth group earned \$285 washing cars. The group's expenses were \$79. How much profit did the group make washing cars?

- 1. A television program lasts for 120 minutes. Of that time, 36 minutes are taken up by commercials. What is the length of the actual program without the commercials?
- 2. Syd spent 215 minutes at the library. Of that time, he spent 120 minutes on the computer. How much of his time at the library did Sid NOT spend on the computer?

Spiral Review (3.NBT.1, 3.NBT.2)

- **3.** Xavier's older brother has 568 songs on his music player. To the nearest hundred, about how many songs are on the music player?
- 4. The students traveled to the zoo in 3 buses. One bus had 47 students. The second bus had 38 students. The third bus had 43 students. How many total students were on the three buses?

- 5. Callie has 83 postcards in her collection. Of the postcards, 24 are from Canada. The rest of the postcards are from the United States. How many of the postcards are from the United States?
- 6. There were 475 seats set up for the school play. At one performance, 189 of the seats were empty.

 How many seats were filled at that performance?

Problem Solving • Model Addition and Subtraction

Use the bar model to solve the problem.

1. Elena went bowling. Elena's score in the first game was 127. She scored 16 more points in the second game than in the first game. What was her total score?

127 16

127 143

points

127 + **16** = ▲

143 = **A**

127 + **143** = ■

points

270 = **•**

270 points

2. Mike's Music sold 287 CDs on the first day of a 2-day sale. The store sold 96 more CDs on the second day than on the first day. How many CDs in all were sold during the 2-day sale?

_____ CDs _____ CDs

CDs	CDs	
♦ CDs♦ =		

Lesson Check (3.0A.8)

- 1. Ms. Hinely picked 46 tomatoes from her garden on Friday. On Saturday, she picked 17 tomatoes. How many tomatoes did she pick?
- 2. Rosa read 57 pages of a book in the morning. She read 13 fewer pages in the afternoon. How many pages did Rosa read in the afternoon?

Spiral Review (3.NBT.1, 3.NBT.2)

- 3. Mike has 57 action figures. Alex has 186 action figures. Estimate the number of action figures Mike and Alex have altogether.
- **4.** There are 500 sheets of paper in the pack Hannah bought. She has used 137 sheets already. How many sheets of paper does Hannah have left?

- 5. There were 378 visitors to the science museum on Friday. There were 409 visitors on Saturday. How many more people visited the museum on Saturday?
- **6.** Ravi scores 247 points in a video game. How many more points does he need to score a total of 650?