Dear Family,

Your child is currently participating in math activities that help him or her to understand place value, rounding, and addition and subtraction of 3-digit numbers.

- **Place Value Drawings:** Students learn to represent numbers with drawings that show how many hundreds, tens, and ones are in the numbers. Hundreds are represented by boxes. Tens are represented by vertical line segments, called ten sticks. Ones are represented by small circles. The drawings are also used to help students understand regrouping in addition and subtraction. Here is a place value drawing for the number 178.

1 hundred	7 tens	8 ones

The 7 ten sticks and 8 circles are grouped in 5s so students can see the quantities easily and avoid errors.

- **Secret Code Cards:** Secret Code Cards are a set of cards for hundreds, tens, and ones. Students learn about place value by assembling the cards to show two- and three-digit numbers. Here is how the number 148 would be assembled.

100	40	8	100 40 8
1 0 0	4 0	8	1 4 8
Hundreds card	Tens card	Ones card	Assembled cards
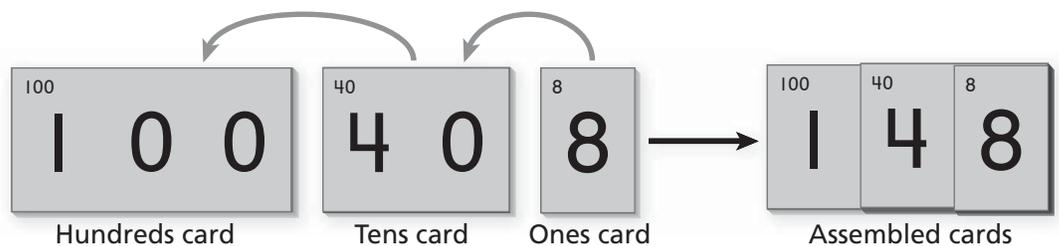
Estimate Sums and Differences Students learn to estimate sums and differences by rounding numbers. They also use estimates to check that their actual answers are reasonable.

	Rounded to the nearest hundred	Rounded to the nearest ten
493	500	490
129	100	130
+ 369	+ 400	+ 370
991	Estimate: 1,000	Estimate: 990

Addition Methods: Students may use the common U.S. method, referred to as the New Groups Above Method, as well as two alternative methods. In the New Groups Below Method, students add from right to left and write the new ten and new hundred on the line. In the Show All Totals method, students add in either direction, write partial sums and then add the partial sums to get the total. Students also use proof drawings to demonstrate grouping 10 ones to make a new ten and grouping 10 tens to make a new hundred.

The New Groups Below Method shows the teen number 13 better than does the New Groups Above Method, where the 1 and 3 are separated. Also, addition is easier in New Groups Below, where you add the two numbers you see and just add 1.

New Groups Above:

1 ← the new ten
46
+ 37
83

New Groups Below:

46
+ 37
1
83

Add right to left. ← the new ten

Show All Totals:

46
+ 37
70
13
83

Add left to right.

Proof Drawing:

8 tens   3 ones   the new ten

Subtraction Methods: Students may use the common U.S. method in which the subtraction is done right to left, with the ungrouping done before each column is subtracted. They also learn an alternative method in which all the ungrouping is done *before* the subtracting. If they do all the ungrouping first, students can subtract either from left to right or from right to left.

The Ungroup First Method helps students avoid the common error of subtracting a smaller top number from a larger bottom number.

1. Ungroup first
2. Subtract (from left to right or from right to left).

15
3 5 13
463
− 275
188

Ungroup 1 hundred to make 10 tens.

Ungroup 1 ten to make 10 ones.

3 hundreds   15 tens   13 ones

Please call if you have any questions or comments.

Thank you.

Sincerely,
Your child's teacher

CA CC

Unit 4 addresses the following standards from the *Common Core State Standards for Mathematics with California Additions:* **3.OA.8, 3.NBT.1, 3.NBT.2,** and all Mathematical Practices.

Carta a la familia

Un vistazo general al contenido

Estimada familia:

Su niño está participando en actividades matemáticas que le servirán para comprender el valor posicional, el redondeo y la suma y resta de números de 3 dígitos.

- **Dibujos de valor posicional:** Los estudiantes aprenden a representar números por medio de dibujos que muestran cuántas centenas, decenas y unidades contienen. Las centenas están representadas con casillas, las decenas con segmentos verticales, llamados palitos de decenas, y las unidades con círculos pequeños. Los dibujos también se usan para ayudar a los estudiantes a comprender cómo se reagrupa en la suma y en la resta. Este es un dibujo de valor posicional para el número 178.

1 centena   7 decenas   8 unidades

Los palitos de decenas y los círculos se agrupan en grupos de 5 para que las cantidades se puedan ver más fácilmente y se eviten errores.

- **Tarjetas de código secreto:** Las tarjetas de código secreto son un conjunto de tarjetas con centenas, decenas y unidades. Los estudiantes aprenden acerca del valor posicional organizando las tarjetas de manera que muestren números de dos y de tres dígitos. Así se puede formar el número 148:

| Tarjeta de centenas | Tarjeta de decenas | Tarjeta de unidades | Tarjetas organizadas |
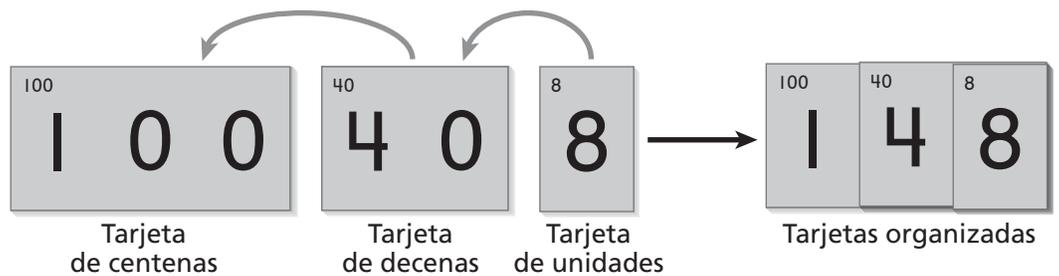
Estimar sumas y diferencias: Los estudiantes aprenden a estimar sumas y diferencias redondeando números. También usan las estimaciones para comprobar que sus respuestas son razonables.

	Redondear a la centena más próxima	Redondear a la decena más próxima
493	500	490
129	100	130
+ 369	+ 400	+ 370
991	Estimación: 1,000	Estimación: 990

Un vistazo general al contenido

Métodos de suma: Los estudiantes pueden usar el método común de EE. UU., conocido como Grupos nuevos arriba, y otros dos métodos alternativos. En el método de Grupos nuevos abajo, los estudiantes suman de derecha a izquierda y escriben la nueva decena y la nueva centena en el renglón. En el método de Mostrar todos los totales, los estudiantes suman en cualquier dirección, escriben sumas parciales y luego las suman para obtener el total. Los estudiantes también usan dibujos de comprobación para demostrar cómo se agrupan 10 unidades para formar una nueva decena, y 10 decenas para formar una nueva centena.

El método de Grupos nuevos abajo muestra el número 13 mejor que el método de Grupos nuevos arriba, en el que se separan los números 1 y 3. Además, es más fácil sumar con Grupos nuevos abajo, donde se suman los dos números que se ven y simplemente se añade 1.

Grupos nuevos arriba:

1 ← la decena nueva
46
+ 37
83

Grupos nuevos abajo:

46
+ 37
1
83

← la decena nueva

Sumar de derecha a izquierda.

Mostrar todos los totales:

46
+ 37
70
13
83

Sumar de izquierda a derecha.

Dibujo de comprobación:

la decena nueva

8 decenas   3 unidades

Métodos de resta: Los estudiantes pueden usar el método común de EE. UU., en el cual la resta se hace de derecha a izquierda, desagrupando antes de restar cada columna. También aprenden un método alternativo en el que desagrupan todo *antes* de restar. Si los estudiantes desagrupan todo primero, pueden restar de izquierda a derecha o de derecha a izquierda.

El método de Desagrupar primero ayuda a los estudiantes a evitar el error común de restar un número pequeño de arriba, de un número más grande de abajo.

1. Desagrupar primero.
2. Restar (de izquierda a derecha o de derecha a izquierda).

15
3 5 13
4 6 3
− 2 7 5
1 8 8

Desagrupar 1 centena para formar 10 decenas.   Desagrupar 1 decena para formar 10 unidades.

3 centenas   15 decenas   13 unidades

Si tiene alguna pregunta o algún comentario, por favor comuníquese conmigo. Gracias.

Atentamente,
El maestro de su niño

CA CC

En la Unidad 4 se aplican los siguientes estándares auxiliares, contenidos en los *Estándares estatales comunes de matemáticas con adiciones para California:* **3.OA.8, 3.NBT.1, 3.NBT.2,** y todos los de prácticas matemáticas.

Name

Date

VOCABULARY
place value

► **Practice Place Value Drawings to 999**

Write the number for each dot drawing.

1.

2.

_____

_____

Write the number for each place value drawing.
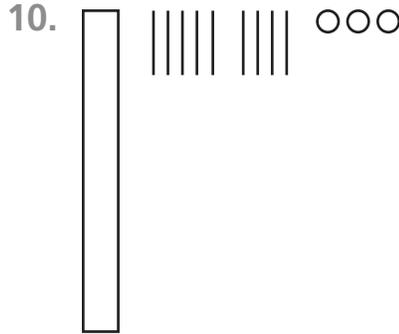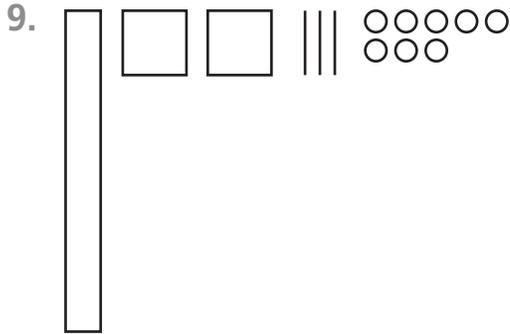
3.

4.

_____

_____

5.

6.

_____

_____
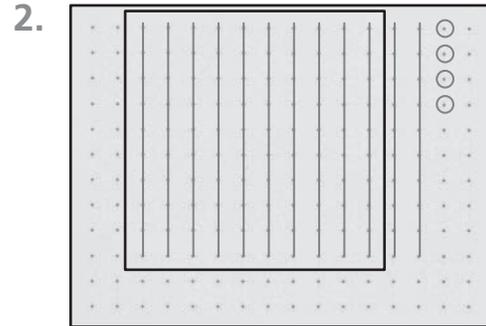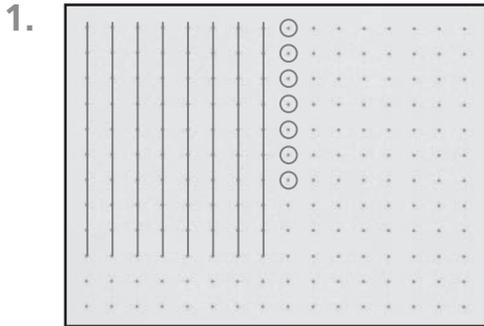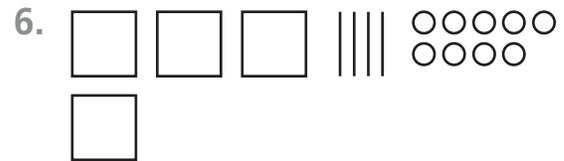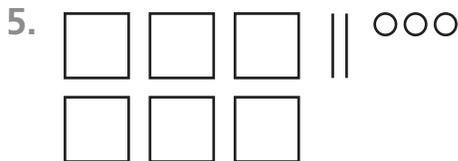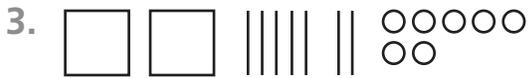
Make a place value drawing for each number.

7. 86

8. 587

▶ Practice with the Thousand Model

Write the number for each place value drawing.

9.

10.

_____   _____

Make a place value drawing for each number.

11. 2,368   12. 5,017

▶ Write Numbers for Word Names

Write the number for the words.

13. eighty-two _____

14. ninety-nine _____

15. four hundred sixty-seven _____

16. nine hundred six _____

17. one thousand, fifteen _____

18. eight thousand, one hundred twenty _____

1	2	10	20
1	2	1 0	2 0

3	4	30	40
3	4	3 0	4 0

5	6	50	60
5	6	5 0	6 0

7	8	70	80
7	8	7 0	8 0

9	90	100
9	9 0	1 0 0

200
2 0 0

300
3 0 0

400
4 0 0

500
5 0 0

600
6 0 0

700
7 0 0

800
8 0 0

900
9 0 0

1000
1 0 0 0

VOCABULARY
expanded form
standard form
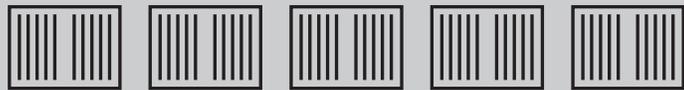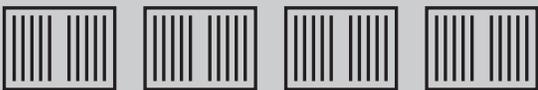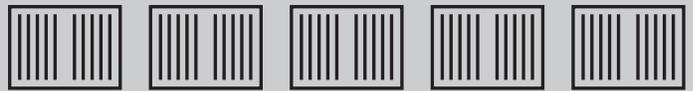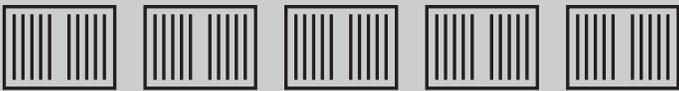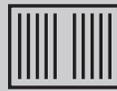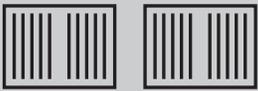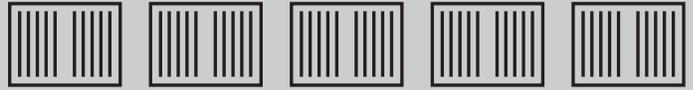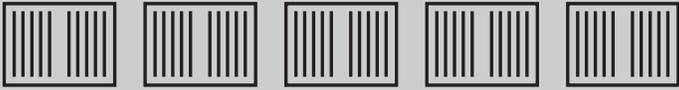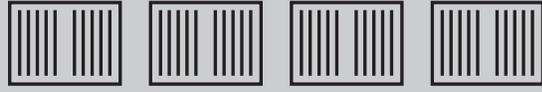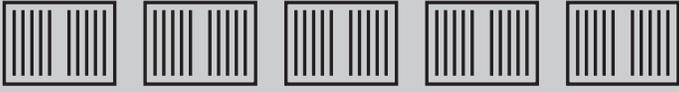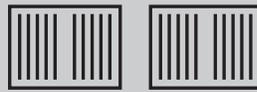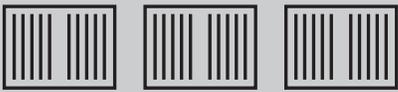
► Read and Write Numbers

Write the number for the words.

1. two hundred twelve _____   2. two thousand, eight _____

3. nine hundred ninety-one _____   4. six thousand, fifty-one _____

5. four hundred sixteen _____   6. six hundred nine _____

7. nine hundred eighty-seven

_____

8. five thousand, thirty

_____

9. four thousand, seventeen

_____

10. eight thousand, six hundred

_____

Write the word name for each number.

11. 783

_____

12. 907

_____

13. 3,001

_____

14. 8,043

_____

Write each number in expanded form.

15. 314 _____   16. 2,148 _____

17. 7,089 _____   18. 8,305 _____

Write each number in standard form.

19. 5 thousands + 8 tens + 7 ones

_____

20. 6 thousands + 4 hundreds + 5 ones

_____

► **Solve and Discuss**

Use a place value drawing to help you solve each problem. Label your answers.

Show your work.

21. Scott baked a batch of rolls. He gave a bag of 10 rolls to each of 7 friends. He kept 1 roll for himself. How many rolls did he bake in all?

_____

22. Sixty-two bags of hot dog buns were delivered to the school cafeteria. Each bag had 10 buns. How many buns were delivered?

_____

Mario and Rosa baked 89 corn muffins.
They put the muffins in boxes of 10.

23. How many boxes did they fill?

_____

24. How many muffins were left over?

_____

Zoe's scout troop collected 743 cans of food to donate to a shelter. They put the cans in boxes of 10.

25. How many boxes did they fill?

_____

26. How many cans were left over?

_____

27. Math Journal Write your own place value word problem. Make a drawing to show how to solve your problem.

Place Value in Word Problems

Name _____   **Date** _____

▶ **Scrambled Place Value Names**

Unscramble the place values and write the number.

1. 8 **ones** + 6 **hundreds** + 4 **tens**

   _____

2. 9 hundreds + 7 tens + 1 one

   _____

3. 5 ones + 0 tens + 7 hundreds

   _____

4. 5 tens + 4 ones + 3 hundreds

   _____

5. 2 tens + 2 hundreds + 2 ones

   _____

6. 8 hundreds + 3 ones + 6 tens

   _____

Unscramble the place values and write the number.
Then, make a place value drawing for the number.

7. 6 hundreds + 9 ones + 3 tens

   _____

8. 9 ones + 3 tens + 8 hundreds

   _____

9. 8 ones + 3 hundreds + 4 tens

   _____

10. 2 hundreds + 9 tens + 1 one

   _____

▶ Solve and Discuss

Solve each problem. Label your answer.

11. The bookstore received 35 boxes of books. Each box held 10 books. How many books did the store receive?

_____

Maya's family picked 376 apples and put them in baskets. Each basket held 10 apples.

12. How many baskets did they fill?   **13.** How many apples were left over?

_____   _____

Aidee had 672 buttons. She put them in bags of 100 buttons each.

14. How many bags did Aidee fill?   **15.** How many buttons were left over?

_____   _____

When Joseph broke open his piggy bank, there were 543 pennies inside. He grouped the pennies into piles of 100.

16. How many piles of 100 did Joseph make?   **17.** How many extra pennies did he have?

_____   _____

Name _____ **Date** _____

CA CC Content Standards **3.NBT.1**, **3.NBT.2**
Mathematical Practices **MP.1**, **MP.2**, **MP.8**

▶ Estimate

Solve the problem.

1. Tasha read three books over the summer. Here is the number of pages in each book:

Watership Down	494 pages
Sounder	128 pages
The Secret Garden	368 pages

About how many pages did Tasha read? Explain how you made your **estimate**.

_____

_____

▶ Practice Rounding

Round each number to the nearest hundred. Use drawings or Secret Code Cards if they help you.

2. 128 _____ 3. 271 _____ 4. 376 _____

5. 649 _____ 6. 415 _____ 7. 550 _____

8. 62 _____ 9. 1,481 _____ 10. 2,615 _____

11. **Explain Your Thinking** When you round a number to the nearest hundred, how do you know whether to round up or round down?

_____

_____

_____

_____

► Solve Problems by Estimating

Solve by rounding to the nearest hundred.

Show your work.

12. At the Lakeside School, there are 286 second graders, 341 third graders, and 377 fourth graders. About how many students are there at the Lakeside School?

_____

13. Last week, Mrs. Larson drove 191 miles on Monday, 225 miles on Wednesday, and 107 miles on Friday. About how many miles did she drive altogether?

_____

14. Of the 832 people at the hockey game, 292 sat on the visiting team side. The rest sat on the home team side. About how many people sat on the home team side?

_____

► Reasonable Answers

Use rounding to decide if the answer is reasonable. Then find the answer to see if you were right.

15. $604 - 180 = 586$

_____

16. $377 + 191 = 568$

_____

17. $268 - 17 = 107$

_____

18. $1,041 + 395 = 646$

_____

19. $407 - 379 = 28$

_____

20. $535 + 287 = 642$

_____

▶ Round 2-Digit Numbers to the Nearest Ten

Round each number to the nearest ten.

1. 63 _____

2. 34 _____

3. 78 _____

4. 25 _____

5. 57 _____

6. 89 _____

7. 42 _____

8. 92 _____

▶ Round 3-Digit Numbers to the Nearest Ten

Round each number to the nearest ten.

9. 162 _____

10. 741 _____

11. 309 _____

12. 255 _____

13. 118 _____

14. 197 _____

15. 503 _____

16. 246 _____

17. **Explain Your Thinking** When you round a number
to the nearest ten, how do you know whether to
round up or round down?

_____

_____

_____

► **Estimate the Answer**

Solve each problem.

18. The chart at the right shows how many smoothies the Juice Hut sold yesterday. By rounding each number to the nearest ten, estimate how many smoothies the Juice Hut sold in all.

_____

Smoothies Sold at Juice Hut
13 raspberry-peach smoothies
38 strawberry-banana smoothies
44 guava-mango smoothies
61 peach-blueberry smoothies

19. Ms. Singh has 52 rock CDs, 75 jazz CDs, 36 classical CDs, and 23 hip-hop CDs. Round each number to the nearest ten to find *about* how many CDs she has.

_____

20. Roz rented a video that is 123 minutes long. She watched 48 minutes of it. Round each number to the nearest ten to estimate how many more minutes she has to watch.

_____

Use the table at the right to solve Problems 21–23.

21. Estimate the total number of books the school received by rounding each number to the nearest hundred.

_____

Jefferson Elementary School Books Received	
Math	436
Reading	352

22. Estimate the total number of books the school received by rounding each number to the nearest ten.

_____

23. Find the total number of math and reading books. Which of your estimates is closer to the actual total?

_____

_____

▶ **Reasonable Answers**

Use rounding to decide if the answer is reasonable. Write *yes* or *no*. Then find the answer to see if you were correct.

24. $93 - 29 = 64$

_____

25. $113 + 57 = 140$

_____

26. $83 + 19 = 102$

_____

27. $336 + 258 = 594$

_____

28. $438 - 158 = 280$

_____

29. $437 + 199 = 536$

_____

30. $725 - 235 = 590$

_____

31. $249 + 573 = 822$

_____

32. $542 - 167 = 475$

_____

▶ What's the Error?

Dear Math Students,

Today my teacher asked me to estimate the answer to this problem:

Ms. Smith's class brought in 384 soup labels. Mr. Alvarez's class brought in 524 soup labels. About how many labels did the two classes bring in?

$$384 \longrightarrow \quad 300$$
$$+524 \longrightarrow \quad +500$$
$$\overline{\quad\quad\quad\quad 800}$$

About 800 soup labels were brought in.

Is my answer correct? If not, please correct my work and tell me what I did wrong.

Your friend,
Puzzled Penguin

33. Write an answer to Puzzled Penguin.
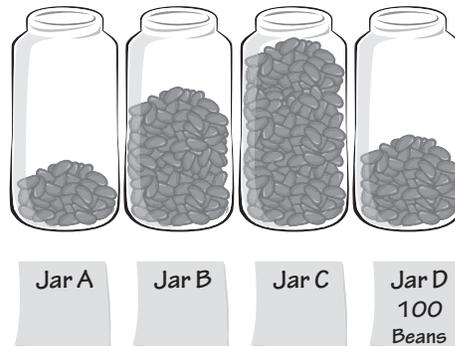
_____

_____

▶ Estimate the Number of Objects

Jar D has 100 Beans. Estimate how many beans are in the other jars.

34. Jar A

_____

35. Jar B

_____

36. Jar C

_____

Jar A   Jar B   Jar C   Jar D
100
Beans

Name _____ Date _____

► Solve and Discuss

Solve each problem. Label your answer. Use your Mathboard or a separate sheet of paper.
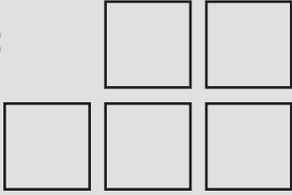
1. Elena made necklaces for her friends. She used 586 green beads and 349 red beads. How many beads did Elena use in all?

_____

2. Fabrice has a collection of 485 basketball cards and 217 baseball cards. How many sports cards does Fabrice have in all?

_____

► PATH to FLUENCY Introduce Addition Methods

Tonya and Mark collect seashells. Tonya has 249 shells, and Mark has 386 shells. How many shells do they have in all?

Here are three ways to find the answer:

Show All Totals Method	New Groups Below Method	New Groups Above Method
249 + 386 ─── 500 120 + 15 ─── 635	249 + 386 ─── 635	$^{1\ 1}$ 249 + 386 ─── 635

Proof Drawing:

6 hundreds   3 tens   5 ones

► PATH to FLUENCY **Practice Addition Methods**

Solve each problem. Make proof drawings to show that your answers are correct.

3. Ryan has two stamp albums. One album has 554 stamps, and the other has 428 stamps. How many stamps does Ryan have in all?

_____

4. One week Ashley read 269 pages. The next week she read 236 pages. What is the total number of pages she read in the two weeks?

_____

5. The video store has 445 comedy videos and 615 drama videos. How many comedy and drama videos does the store have altogether?

_____

6. Ali has 128 photos of her pets and 255 photos of her family. How many photos does Ali have altogether?

_____

▶ PATH to FLUENCY **Solve and Discuss**

**Solve each problem using a numerical method and
a proof drawing.**

1. There are 359 cars and 245 trucks in the parking garage. How many vehicles are in the garage?

2. The Creepy Crawler exhibit at the science museum has 693 spiders and 292 centipedes. How many spiders and centipedes are there in all?

3. On Saturday, 590 people went to the art museum. On Sunday, 355 went to the museum. How many people went to the museum altogether?

4. There were 120 people on the ferry yesterday. Today the ferry had 767 people. How many people in all were on the ferry during the past two days?

► What's the Error?

Dear Math Students,

Today I found the answer to 168 + 78,
but I don't know if I added correctly.
Please look at my work. Is my answer
right? If not, please correct my work
and tell what I did wrong.

Your friend,
Puzzled Penguin

$$\begin{array}{r} 168 \\ +\ 78 \\ \hline 948 \end{array}$$

5. Write an answer to Puzzled Penguin.

_____

_____

► PATH to FLUENCY Line Up the Places to Add

**Write each addition vertically. Line up the places
correctly. Then add and make a proof drawing.**

6. 179 + 38 = _____   **7.** 650 + 345 = _____   **8.** 407 + 577 = _____

▶ **PATH to FLUENCY** **Decide When to Group**

Decide which new groups you will make.
Then add to see if you were correct.

1. 123
  + 247

2. 358
  + 434

3. 732
  + 189

4. 416
  + 396

Add.

5. 647
  + 178

6. 132
  + 763

7. 554
  + 257

8. 168
  + 692

9. 384
  + 586

10. 631
  + 189

11. 464
  + 446

12. 313
  + 649

13. 576 + 265

14. 389 + 511

15. 568 + 219

16. 137 + 284

Write an equation and solve the problem.

17. The first animated film at the movie theatre
lasted 129 minutes. The second film lasted
104 minutes. How many minutes in all did
the two movies last?

► Solve and Discuss

Write an equation and solve the problem.   *Show Your Work.*

18. Jacob has 347 basketball cards in his collection. He has 256 baseball cards. How many cards does he have altogether?

_____

19. Jasmine's family drove for two days to visit her grandparents. They drove 418 miles on the first day and 486 miles on the second day. How many miles did they drive in all?

_____

20. The florist ordered 398 roses and 562 tulips. How many flowers did the florist order in all?

_____

21. Emilio checked a suitcase at the airport. His suitcase weighed 80 pounds. His wife checked three suitcases. Each of her suitcases weighed 30 pounds. How many pounds in all did their suitcases weigh?

_____

22. Write and solve an addition word problem where 287 and 614 are addends.

_____

_____

_____

Name _____ Date _____

▶ Add Three-Digit Numbers

School Carnival Rides

Rides	Tickets Sold
Twister	298
Monster Mix	229
Crazy Coaster	193
Mega Wheel	295
Bumper Cars	301
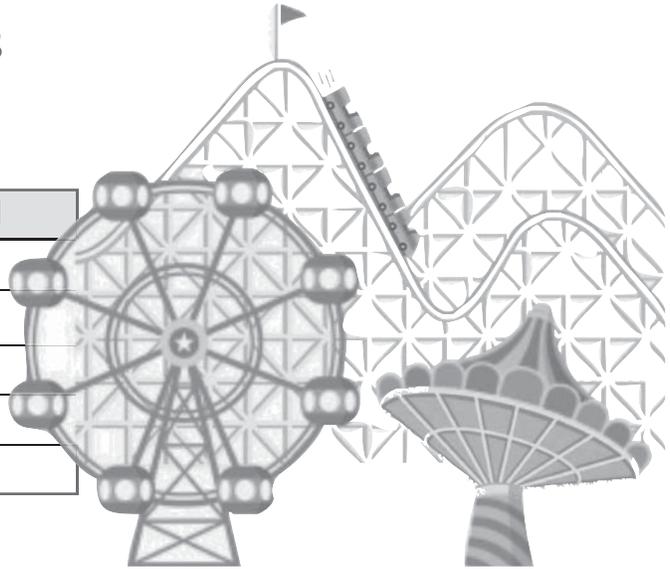
Write an equation and solve the problem.

Show Your Work.

1. How many people went on the two most popular rides?

   _____

2. The total tickets sold for which two rides was 494?

   _____

3. Tickets for the Monster Mix and Crazy Coaster sold for $2. How much money did the school earn on the ticket sales for these two rides?

   _____

4. About how many tickets were sold for Twister, Monster Mix, and Mega Wheel altogether?

   _____

5. The total tickets sold for which three rides equals about 900?

   _____

▶ Use Addition to Solve Problems

Student Collections

Type of Collection	Number of Objects
rocks	403
stamps	371
shells	198
buttons	562
miniature cars	245

Write an equation and solve the problem.

Show Your Work.

6. How many objects are in the two smallest collections?

   _____

7. The total number of objects in two collections is 760. What are the collections?

   _____

8. Are the combined collections of shells and buttons greater than or less than the combined collections of rocks and stamps?

   _____

9. Is the estimated sum of stamps, shells, and miniature cars closer to 700 or to 800?

   _____

10. Suppose another student has a collection of sports cards. The number of sports cards is 154 greater than the number of rocks. How many cards are in the sports cards collection?

   _____

4-11

Class Activity

Name

Date

CA CC Content Standards **3.NBT.2**
Mathematical Practices **MP.1**, **MP.3**, **MP.4**, **MP.6**, **MP.7**

► PATH to FLUENCY **Discuss Subtraction Methods**

Solve this word problem.

> Mr. Kim had 134 jazz CDs. He sold 58 of them at his garage sale. How many jazz CDs does he have now?

1. Write a subtraction that you could do to answer this question.

   _____

2. Make a place value drawing for 134. Take away 58. How many are left?

3. Write a numerical solution method for what you did in the drawing.

4. Describe how you ungrouped to subtract.

   _____

   _____

   _____

   _____

► **What's the Error?**

Dear Math Students,

Today I found the answer to 134 – 58, but I don't know if I did it correctly. Please look at my work. Is my answer right? If not, please correct my work and tell what I did wrong.

```
 134
– 58
─────
 124
```

Your friend,
Puzzled Penguin

5. Write an answer to Puzzled Penguin.

_____

_____

► PATH to FLUENCY **Subtraction Detective**

To avoid making subtraction mistakes, look at the top number closely. Do all the **ungrouping** you need to *before* you **subtract**. The magnifying glass around the top number helps you remember to be a "subtraction detective."

Subtract. Show your ungroupings numerically and with proof drawings.

6.
```
 371
–  86
```

7.
```
 163
–  47
```

8.
```
 459
–175
```

9.
```
 277
–  68
```

Ungroup to Subtract

4-12

Class Activity

Name

Date

CA CC Content Standards **3.NBT.2**
Mathematical Practices **MP.1**, **MP.2**, **MP.4**

► PATH to FLUENCY **Ungroup to Subtract**

**Solve each problem. Show your work numerically
and with proof drawings.**

1. Lakesha bought a box of 500 paper clips. So far,
   she has used 138 of them. How many are left?

2. A movie theater has 400 seats. At the noon show,
   329 seats were filled. How many seats were empty?

3. At the start of the school year, Seiko had a brand
   new box of 300 crayons. Now 79 crayons are
   broken. How many unbroken crayons does
   Seiko have?

▶ (PATH to FLUENCY) **Subtract Across Zeros**

Solve each problem. Show your work numerically and with proof drawings.

4. The students at Freedom Elementary School have a goal of reading 900 books. They have read 342 books. How many books do the students have left to read?

_____

5. There are 500 fiction books in the Lee School Library. There are 179 fewer non-fiction books than fiction books. How many books are non-fiction?

_____

6. The students at Olympia Elementary School collected 1,000 bottles for recycling. The students at Sterling Elementary collected 768 bottles. How many more bottles did the students at Olympia collect?

_____

► **PATH to FLUENCY** **Practice Subtracting Across Zeros**

Subtract. Make proof drawings for Exercises 7–10 on MathBoards or on a separate sheet of paper.

7.
```
  8 0 0
− 3 9 1
```

8.
```
  5 0 0
− 3 3 3
```

9.
```
  4 0 0
− 2 1 7
```

10.
```
  9 0 0
− 8 1 8
```

11.
```
  6 0 0
− 5 7 5
```

12.
```
  7 0 0
− 2 4 8
```

13.
```
  2 0 0
− 1 0 9
```

14.
```
  8 0 0
− 5 1 9
```

15. Math Journal Write a word problem that is solved by subtracting a 2-digit number from a 3-digit number that has a zero in both the ones and tens places. Then solve the problem.

▶ **PATH to FLUENCY** **Practice Deciding When to Ungroup**

Subtract. Make proof drawings if you need to on MathBoards or on a separate sheet of paper.

16. 912 − 265

17. 323 − 147

18. 280 − 136

19. 489 − 263

20. 754
      − 389

21. 912
      − 437

22. 341
      − 178

23. 603
      − 464

Name   Date

CA CC Content Standards **3.NBT.2**
Mathematical Practices **MP.1**, **MP.2**

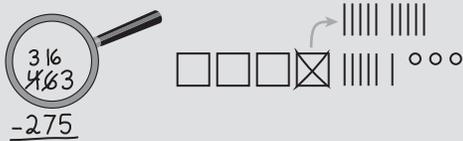► PATH to FLUENCY **Ungroup from Left or Right**

Tony and Maria each solved this problem:

On Tuesday morning, a music store had 463 copies
of the new School Daze CD. By the end of the day,
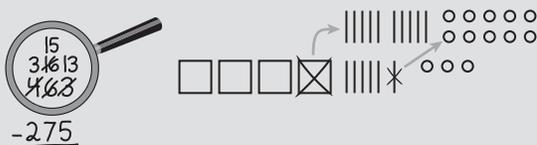they had sold 275 copies. How many copies were left?

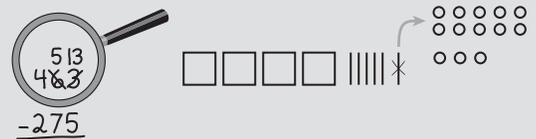| Tony	Maria
Tony started ungrouping from the left.	Maria started ungrouping from the right.
1. He has enough hundreds.	**1.** She does not have enough ones. She ungroups 1 ten to make 10 more ones.
2. He does not have enough tens. He ungroups 1 hundred to make 10 more tens.	
2. She does not have enough tens. She ungroups 1 hundred to get 10 more tens.	
3. He does not have enough ones. He ungroups 1 ten to make 10 more ones.	**3.** She has enough hundreds.
4. Complete the subtraction.	**4.** Complete the subtraction.
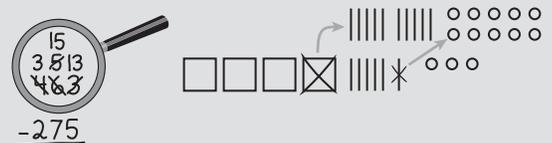
© Houghton Mifflin Harcourt Publishing Company
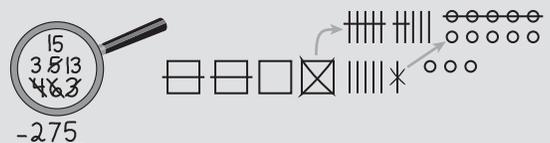
▶ PATH to FLUENCY **Choose a Method to Subtract**

Subtract.

1. 686
   − 387

2. 340
   − 167

3. 765
   − 498

4. 841
   − 253

5. 912
   − 575

6. 853
   − 194

7. 705
   − 429

8. 998
   − 299

9. 513
   − 156

10. 627 − 348

11. 544 − 169

12. 810 − 261

Solve.

13. Rochelle is putting 302 digital photos in an album. Of these, 194 are from her trip to the Grand Canyon. How many photos are not from Rochelle's trip?

14. There were 645 bicycles in a race. Toby finished eighty-seventh. How many bicycles finished after Toby?

► PATH to FLUENCY **Relate Addition and Subtraction**

**Solve each problem. Make a proof drawing
if you need to.**

1. There were 138 students in the gym for the
   assembly. Then 86 more students came in. How
   many students were in the gym altogether?

2. There were 224 students in the gym for the
   assembly. Then 86 students left. How many
   students were still in the gym?

3. Look at your addition, subtraction, and proof
   drawings from Problems 1 and 2. How are
   addition and subtraction related?

▶ Solve and Discuss

Solve. Label your answers.   *Show your work.*

4. Marly had 275 baseball cards. Her brother gave her a collection of 448 baseball cards. How many baseball cards does Marly have now?

_____

5. Write a subtraction word problem related to the addition word problem in Problem 4. Then find the answer without doing any calculations.

_____

_____

_____

6. Bill drove 375 miles on the first day of his cross-country trip. The next day he drove an additional 528 miles. How many miles did Bill drive on the first two days of his trip?

_____

7. Write a subtraction problem related to the addition word problem in Problem 6. Then find the answer without doing any calculations.

_____

_____

_____

4-15

Class Activity

Name

Date

CA CC Content Standards **3.NBT.2**
Mathematical Practices **MP.1**, **MP.2**

▶ **Subtract and Check**

Solve each problem.

Show Your Work.

1. Ken collects photographs as a hobby. He has 375 photographs in his collection at home. If Ken brought 225 of his photographs to share with his classmates, how many photographs did he leave at home?

2. Of the 212 third- and fourth-grade students, 165 attended the school festival. How many students did not attend the festival?

3. Becky's mom has 653 CDs in her collection. Becky's aunt has 438 CDs in her collection. How many more CDs does Becky's mom have than Becky's aunt?

4. Andrea and John need 750 tickets to get a board game. They have 559 tickets. How many more tickets do they need?

▶ PATH to FLUENCY **Practice Deciding When to Ungroup**

Answer each question.

> Adair subtracted 595 from 834.

5. Did she have to ungroup to make more tens? Explain.

_____

_____

_____

6. Did she have to ungroup to make more ones? Explain.

_____

_____

_____

> Beatrice subtracted 441 from 950.

7. Did she have to ungroup to make more tens? Explain.

_____

_____

_____

8. Did she have to ungroup to make more ones? Explain.

_____

_____

_____

> Wan subtracted 236 from 546.

9. Did he have to ungroup to make more tens? Explain.

_____

_____

_____

10. Did he have to ungroup to make more ones? Explain.

_____

_____

_____

Name _____ **Date** _____

▶ PATH to FLUENCY **Practice Addition and Subtraction**

Add or subtract.

1.   112
   + 459

2.   572
   − 357

3.   253
   + 328

4.   710
   − 464

5.   461
   − 182

6.   540
   + 175

7.   921
   − 653

8. 398
   − 99

9.   712
   + 189

10.   600
   − 223

11.   809
   − 576

12.   634
   + 287

Solve.

13. The height of Angeline Falls in Washington is 450 feet. Snoqualmie Falls in Washington is 182 feet lower than Angeline Falls. What is the height of Snoqualmie Falls?

_____

14. Jill scored 534 points at the arcade on Friday night. She scored 396 points on Saturday night. How many points did she score altogether?

_____

Name _____ **Date** _____

► Solve Real World Problems

The students at Liberty Elementary collected pennies for a fundraiser.

Pennies Collected	
Grade	**Number of Pennies**
Grade 1	225
Grade 2	436
Grade 3	517
Grade 4	609
Grade 5	342

Write an equation and solve the problem.

Show Your Work.

15. How many pennies did Grades 2 and 5 collect?

_____

16. How many more pennies did Grades 1 and 3 collect than Grade 4?

_____

17. Is the total number of pennies collected by Grades 1 and 4 greater than or less than the total number collected by Grades 3 and 5?

_____

18. The total number of pennies collected by which three grades equals about 1,000?

_____

19. Suppose the kindergarten students collected 198 fewer pennies than the Grade 3 students. How many pennies would the kindergarteners have collected?

_____

Addition and Subtraction Practice

▶ Solve Multistep Word Problems

Solve each problem. Label your answers.

Show your work.

1. Isabel bought 36 pieces of fruit for her soccer team. There are 16 apples, 12 bananas, and the rest are pears. How many pieces of fruit are pears?

   _____

2. Toby has a collection of sports cards. He had 13 baseball cards, 16 basketball cards, and 14 football cards. Toby sold 15 cards and he bought 17 hockey cards. What is the total number of cards in Toby's collection now?

   _____

3. There are 15 more boys than girls in the school band. There are 27 girls. How many students are in the school band?

   _____

4. Finn delivered 13 pizzas. Then he delivered 8 more pizzas. Altogether, he delivered 6 fewer pizzas than Liz. How many pizzas did Liz deliver?

   _____

5. Majeed built 7 car models and 14 airplane models. Jasmine built 9 more car models than Majeed and 6 fewer airplane models. How many models did Jasmine build in all?

   _____

► Reasonable Answers

Use rounding to decide if the answer is reasonable. Write
yes **or** *no*. **Then find the answer to see if you were correct.**

6. Nathan counted 28 large dogs and 37 small dogs
   at the dog park. He said he saw 55 dogs in all.

   _____

7. There are 122 third-and fourth-grade students at
   Cedar Creek Elementary School. There are 67 students
   in third grade and 55 students in fourth grade.

   _____

8. The pet supermarket sold 245 bags of dog food and
   167 bags of cat food. The supermarket sold 312 bags
   of pet food in all.

   _____

9. The total distance from Charleston, West Virginia
   to Biloxi, Mississippi is 913 miles. Benjamin drove
   455 miles from Charleston to Athens, Georgia.
   Then he drove 458 miles from Athens to Biloxi.

   _____

10. There were 432 people at the basketball game.
    257 people sat on the home team side. 175 people
    sat on the visiting team side.

   _____

11. The Pecos River is 234 miles longer than the
    Yellowstone River. The Yellowstone River is
    692 miles long. The Pecos River is 826 miles long.

   _____

► Math and Maps

The Pony Express was a mail service from St. Joseph, Missouri, to Sacramento, California. The Pony Express service carried mail by horseback riders in relays.

**Use the information on the map for Problems 1–3.
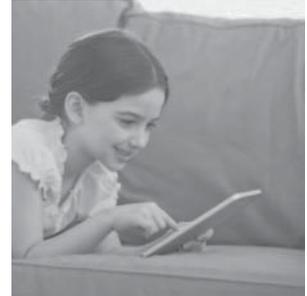Write an equation and solve the problem.**

1. How many miles did the Pony Express riders travel on a trip from Sacramento to Salt Lake City?

_____

2. The total distance from St. Joseph to Fort Laramie is 616 miles. How many miles is it from Julesburg to Fort Laramie?

_____

3. Write and solve a problem that can be answered using the map.

_____

▶ Use a Table

It took the Pony Express 10 days to deliver letters between Sacramento and St. Joseph. Today we send emails that are delivered within a few minutes. The chart below shows the number of emails sent in a month by different students.

Number of Emails Sent last Month					
Name	Robbie	Samantha	Ellen	Bryce	Callie
Number	528	462	942	388	489

Use the information in the table for Problems 4–6.
Write an equation and solve the problem.

4. How many more emails did Robbie send than Callie?

   _____

5. How many more emails did Ellen send than Bryce and Samantha combined?

   _____

6. Tamara said that Robbie and Bryce together sent 806 emails. Is her answer reasonable? Explain. Then find the actual answer to see if you are correct.

   _____

   _____

   _____

Focus on Mathematical Practices

1. Select the way that shows three hundred fifty-seven. Mark all that apply.

   (A) 357

   (B) 3 hundreds + 57 tens

   (C) 3 hundreds + 5 tens + 7 ones

   (D) [place value drawing: three squares, five vertical lines, seven circles]
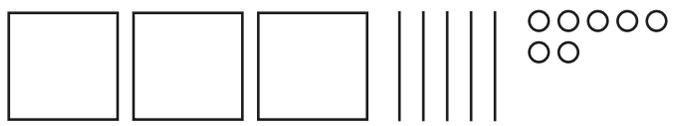
   (E) 300 + 5 + 7

2. Make a place value drawing for the number.

   691
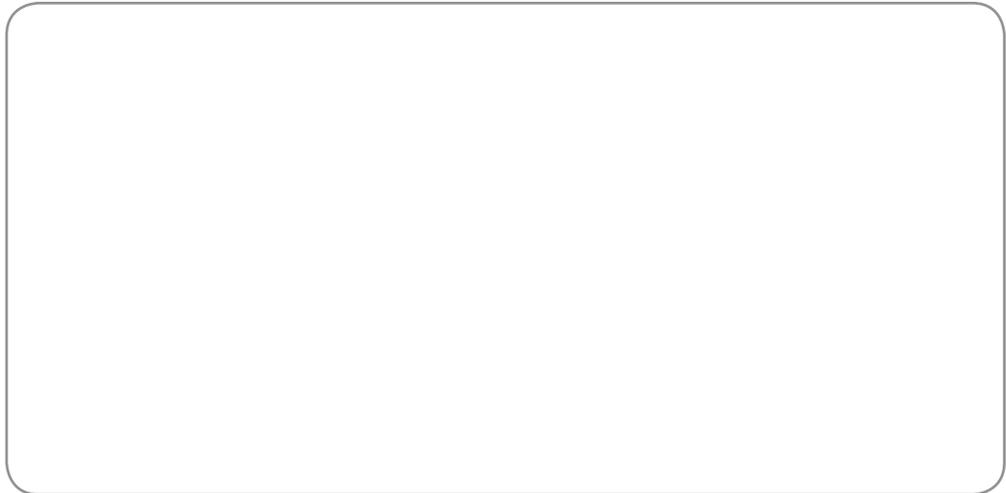
3. A shop sells 564 posters. It sells 836 calendars. Round each number to the nearest ten to estimate about how many more calendars the shop sells than posters.

   about _____ more calendars

Name _____   Date _____

4. Write the number in the box that shows how it should be rounded to the nearest hundred.

| 479 | 440 | 655 | 405 | 643 |

400	500	600	700

5. For numbers 5a–5e, use rounding to decide whether the answer is reasonable. Choose Yes or No.

5a. $187 - 43 = 144$ ○ Yes ○ No
5b. $328 + 87 = 385$ ○ Yes ○ No
5c. $652 + 189 = 841$ ○ Yes ○ No
5d. $1,293 - 126 = 367$ ○ Yes ○ No
5e. $2,946 - 488 = 2,458$ ○ Yes ○ No

6. Choose the difference that completes the number sentence.

$425 - 346 =$
| 79 |
| 89 |
| 121 |
| 771 |

Name _____ **Date** _____

7. Subtract.

$700 - 255 =$

	7	0	0
−	☐	☐	☐
	☐	☐	☐

8. Add.

$$\begin{array}{r} 521 \\ + 129 \\ \hline \end{array}$$

(A) 640   (C) 650

(B) 641   (D) 651

For numbers 9 and 10, add or subtract. Make a proof drawing to show that your answer is correct.

9. $\begin{array}{r} 497 \\ + 326 \\ \hline \end{array}$

10. $\begin{array}{r} 690 \\ - 493 \\ \hline \end{array}$

Name _____ Date _____

For numbers 11 and 12, add or subtract. *Show your work.*

11.   437
      + 273

Which method did you use to add?

New Groups Above
I used the	New Groups Below	method.
Show All Totals

I used the | New Groups Above / New Groups Below / Show All Totals | method.

12.   617
      − 549

Did you ungroup to subtract? Explain why or why not.

13. Andre buys 860 bricks. He buys 575 red bricks and
    147 tan bricks. The rest of the bricks are gray. Write
    and solve an equation to find how many gray bricks
    Andre buys.

                    Equation: _____

                    _____ gray bricks

    What if Andre returns 248 red bricks, 85 tan bricks,
    and 58 gray bricks? How many bricks does Andre
    have now?

                    _____ bricks

Name _____ Date _____

14. Pia collects 245 acorns in a jar. For numbers 14a–14d, select True or False for each statement.

14a. Pia collects 193 more acorns.
She now has 338 acorns. ○ True ○ False

14b. Pia gives 160 acorns to Ana.
She now has 85 acorns. ○ True ○ False

14c. Pia collects 286 more acorns.
She uses 143 to decorate a tray.
She now has 388 acorns. ○ True ○ False

14d. Pia gives her two sisters 85 acorns
each. She now has 160 acorns. ○ True ○ False

15. Li earns 321 points in the first round of a math contest. He earns another 278 points in the second round and 315 points in the third round. Li says he has 804 points.

Is Li's answer reasonable? Explain.

Find the actual answer to check if you are correct.

Name _____   Date _____

16. Darian sells 293 bags of popcorn and 321 bags of peanuts.

Part A

How many bags of popcorn and peanuts does Darian sell?

_____ bags

Part B

Write a subtraction word problem related to how many bags of popcorn and peanuts Darian sells. Then find the answer without doing any calculations.

17. A zoo has 209 reptiles. There are 93 lizards and 52 turtles. The rest are snakes. How many snakes are at the zoo?

_____ snakes