

Name \_\_\_\_\_

**Problem Solving • Comparison Problems**  
**with Addition and Subtraction**

**Essential Question** How can you use the strategy *draw a diagram* to solve comparison problems with addition and subtraction?



Number and Operations in Base Ten—4.NBT.B.4

**MATHEMATICAL PRACTICES**  
MP3, MP4, MP5, MP8

**Unlock the Problem**

Hot air balloon festivals draw large crowds of people. The attendance on the first day of one festival was 17,350. On the second day the attendance was 18,925. How many more people attended the hot air balloon festival on the second day?



Use the graphic organizer to help you solve the problem.

**Read the Problem**

**What do I need to find?**

Write what you need to find.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**What information do I need to use?**

\_\_\_\_\_ people attended on the first day,

\_\_\_\_\_ people attended on the second day.

**How will I use the information?**

What strategy can you use?

\_\_\_\_\_

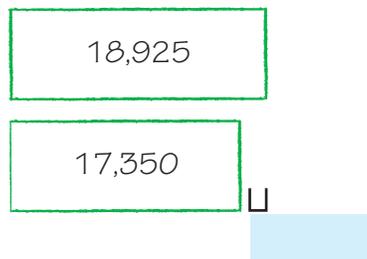
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Solve the Problem**

I can draw a bar model and write an equation to represent the problem.



$18,925 - 17,350 = \underline{\hspace{2cm}}$

So, \_\_\_\_\_ more people attended the festival on the second day.

## Try Another Problem

During an event, a hot air balloon traveled a distance of 5,110 feet during the first trip and 850 feet more during the second trip. How far did it travel during the second trip?



### Read the Problem

What do I need to find?

What information do I need to use?

How will I use the information?

### Solve the Problem

- Is your answer reasonable? Explain how you know.

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MATHEMATICAL PRACTICES **8**

**Generalize** How can inverse operations be used to check your answer?

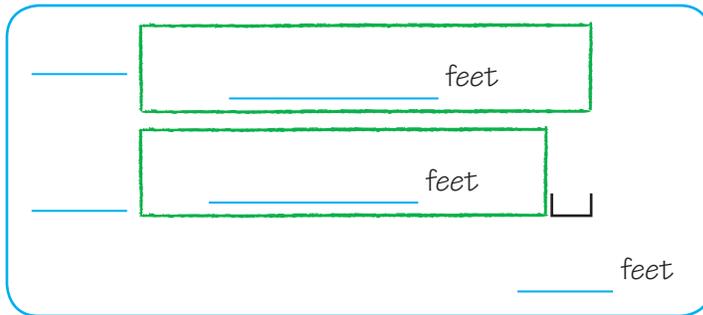
Name \_\_\_\_\_

## Share and Show



- Hot air balloons are able to fly at very high altitudes. A world record height of 64,997 feet was set in 1988. In 2005, a new record of 68,986 feet was set. How many feet higher was the 2005 record than the 1988 record?

**First**, draw a diagram to show the parts of the problem.



**Next**, write the problem you need to solve.

**Last**, solve the problem to find how many feet higher the 2005 record was than the 1988 record.

So, the 2005 record was \_\_\_\_\_ feet higher.

- What if a new world altitude record of 70,000 feet was set? How many feet higher would the new record be than the 2005 record?

\_\_\_\_\_

- Last year, the ticket sales for a commercial hot air balloon ride were \$109,076. This year, the ticket sales were \$125,805. How much more were the ticket sales this year?

\_\_\_\_\_

- A musician's first album sells 234,499 copies the first week it was released. During the second week, another 432,112 albums were sold. How many more albums were sold during the second week than the first week?

## Unlock the Problem

- ✓ Use the Problem Solving MathBoard
- ✓ Underline important facts.
- ✓ Choose a strategy you know.



▲ Dr. Vijaypat Singhania flew the world's largest hot-air balloon when he made his record-breaking flight. The balloon he flew was over 20 stories tall.

## On Your Own

Use the information in the table for 5–6.

5. **MATHEMATICAL PRACTICE 4 Use Models** Steve Fossett attempted to fly around the world in a balloon several times before he succeeded in 2002. How many more miles did he fly during the 2002 flight than during the August 1998 flight?

**Steve Fossett's  
Balloon Flights**

Year	Distance in Miles
1996	2,200
1997	10,360
1998 (January)	5,803
1998 (August)	14,235
2001	3,187
2002	20,482

6. **GO DEEPER** Is the combined distance for the 1998 flights more or less than the distance for the 2002 flight? By how much? Explain.

7. **THINK SMARTER** There were 665 hot air balloon pilots at a hot air balloon race. There were 1,550 more ground crew members than there were pilots. How many pilots and ground crew members were there all together?



8. **THINK SMARTER +** The first year Becky owned her car she drove it 14,378 miles. The second year she drove it 422 miles less than the first year. She bought the car with 16 miles on it. How many miles were on the car at the end of the second year? Show your work.

**Personal Math Trainer**



Name \_\_\_\_\_

**Problem Solving • Comparison Problems with Addition and Subtraction**

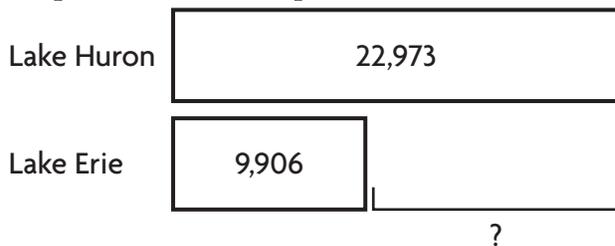


**COMMON CORE STANDARD—4.NBT.B.4**  
Use place value understanding and properties of operations to perform multi-digit arithmetic.

Use the information in the table for 1–3.

1. How many square miles larger is the surface area of Lake Huron than the surface area of Lake Erie?

**Think:** How can a bar model help represent the problem? What equation can be written?



$22,973 - 9,906 = \underline{13,067}$  square miles

Surface Area of the Great Lakes	
Lake	Surface Area (in square miles)
Lake Superior	31,700
Lake Michigan	22,278
Lake Huron	22,973
Lake Erie	9,906
Lake Ontario	7,340

13,067 square miles

2. Which lake has a surface area that is 14,938 square miles greater than the surface area of Lake Ontario? Draw a model and write a number sentence to solve the problem.

3. Lake Victoria has the largest surface area of all lakes in Africa. Its surface area is 26,828 square miles. How much larger is the surface area of Lake Superior than that of Lake Victoria?

4. **WRITE** *Math* Write a comparison problem you can solve using addition or subtraction. Draw a bar model to represent the situation. Describe how the information in the bar model is related to the problem.

## Lesson Check (4.NBT.B.4)

1. The Mariana Trench in the Pacific Ocean is about 36,201 feet deep. The Puerto Rico Trench in the Atlantic Ocean is about 27,493 feet deep. Draw a bar model to find, how many feet deeper the Mariana Trench is than the Puerto Rico Trench.
2. At 1,932 feet, Crater Lake in Oregon, is the deepest lake in the United States. The world's deepest lake, Lake Baykal in Russia, is 3,383 feet deeper. Draw a bar model to find how deep Lake Baykal is.

## Spiral Review (4.NBT.A.3, 4.NBT.B.4)

3. Write a number that is greater than 832,458, but less than 832,500.  

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4. A stadium in Pennsylvania seats 107,282 people. A stadium in Arizona seats 71,706 people. Based on these facts, how many more people does the stadium in Pennsylvania seat than the stadium in Arizona?  

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5. What is 399,713 rounded to the place value of the underlined digit?  

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6. About 400,000 people visited an art museum in December. What could be the exact number of people who visited the art museum?  

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