

Name _____

Date _____

1. Use the standard algorithm to solve the following subtraction problems.

$$\begin{array}{r} \text{a.} \quad 2,460 \\ -1,370 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b.} \quad 2,460 \\ -1,470 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c.} \quad 97,684 \\ -49,700 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d.} \quad 2,460 \\ -1,472 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e.} \quad 124,306 \\ -31,117 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f.} \quad 97,684 \\ -4,705 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g.} \quad 124,006 \\ -121,117 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h.} \quad 97,684 \\ -47,705 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i.} \quad 124,060 \\ -31,117 \\ \hline \end{array}$$

Draw a tape diagram to represent each problem. Use numbers to solve, and write your answer as a statement. Check your answers.

2. There are 86,400 seconds in one day. If Mr. Liegel is at work for 28,800 seconds a day, how many seconds a day is he away from work?

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1. Use the standard algorithm to solve the following subtraction problems.

a.
$$\begin{array}{r} 71,989 \\ - 21,492 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 371,989 \\ - 96,492 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 371,089 \\ - 25,192 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 879,989 \\ - 721,492 \\ \hline \end{array}$$

e.
$$\begin{array}{r} 879,009 \\ - 788,492 \\ \hline \end{array}$$

f.
$$\begin{array}{r} 879,989 \\ - 21,070 \\ \hline \end{array}$$

g.
$$\begin{array}{r} 879,000 \\ - 21,989 \\ \hline \end{array}$$

h.
$$\begin{array}{r} 279,389 \\ - 191,492 \\ \hline \end{array}$$

i.
$$\begin{array}{r} 500,989 \\ - 242,000 \\ \hline \end{array}$$

Draw a tape diagram to represent each problem. Use numbers to solve, and write your answer as a statement. Check your answers.

- Jason ordered 239,021 pounds of flour to be used in his 25 bakeries. The company delivering the flour showed up with 451,202 pounds. How many extra pounds of flour were delivered?
- In May, the New York Public Library had 124,061 books checked out. Of those books, 31,117 were mystery books. How many of the books checked out were not mystery books?
- A Class A dump truck can haul 239,000 pounds of dirt. A Class C dump truck can haul 600,200 pounds of dirt. How many more pounds can a Class C truck haul than a Class A truck?

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Use the standard algorithm to solve the following subtraction problems.

1.
$$\begin{array}{r} 19,350 \\ - 5,761 \\ \hline \end{array}$$

2. $32,010 - 2,546$

Draw a tape diagram to represent the following problem. Use numbers to solve, and write your answer as a statement. Check your answer.

3. A doughnut shop sold 1,232 doughnuts in one day. If they sold 876 doughnuts in the morning, how many doughnuts were sold during the rest of the day?

Lesson 15

Objective: Use place value understanding to fluently decompose to smaller units multiple times in any place using the standard subtraction algorithm, and apply the algorithm to solve word problems using tape diagrams.

Suggested Lesson Structure

■ Fluency Practice	(11 minutes)
■ Application Problem	(6 minutes)
■ Concept Development	(32 minutes)
■ Student Debrief	(11 minutes)
Total Time	(60 minutes)



Fluency Practice (11 minutes)

- Place Value **4.NBT.2** (3 minutes)
- Find the Difference **4.NBT.4** (4 minutes)
- Convert Units **4.MD.1** (4 minutes)

Place Value (3 minutes)

Materials: (T) Personal white board

Note: Practicing these skills in isolation helps lay a foundation for conceptually understanding this lesson’s content.

- T: (Write 4,598.) Say the number.
 S: 4,598.
 T: What digit is in the tens place?
 S: 9.
 T: (Underline 9.) What is the value of the 9?
 S: 90.
 T: State the value of the digit 4.
 S: 4,000.
 T: 5?
 S: 500.

Repeat using the following possible sequence: 69,708; 398,504; and 853,967.

Name _____

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1. Use the standard subtraction algorithm to solve the problems below.

a.
$$\begin{array}{r} 101,660 \\ - 91,680 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 101,660 \\ - 9,980 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 242,561 \\ - 44,702 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 242,561 \\ - 74,987 \\ \hline \end{array}$$

e.
$$\begin{array}{r} 1,000,000 \\ - 592,000 \\ \hline \end{array}$$

f.
$$\begin{array}{r} 1,000,000 \\ - 592,500 \\ \hline \end{array}$$

g.
$$\begin{array}{r} 600,658 \\ - 592,569 \\ \hline \end{array}$$

h.
$$\begin{array}{r} 600,000 \\ - 592,569 \\ \hline \end{array}$$

Use tape diagrams and the standard algorithm to solve the problems below. Check your answers.

- David is flying from Hong Kong to Buenos Aires. The total flight distance is 11,472 miles. If the plane has 7,793 miles left to travel, how far has it already traveled?
- Tank A holds 678,500 gallons of water. Tank B holds 905,867 gallons of water. How much less water does Tank A hold than Tank B?
- Mark had \$25,081 in his bank account on Thursday. On Friday, he added his paycheck to the bank account, and he then had \$26,010 in the account. What was the amount of Mark's paycheck?

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1. Use the standard subtraction algorithm to solve the problems below.

a.
$$\begin{array}{r} 9,656 \\ - \quad 838 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 59,656 \\ - \quad 5,880 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 759,656 \\ - \quad 579,989 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 294,150 \\ - \quad 166,370 \\ \hline \end{array}$$

e.
$$\begin{array}{r} 294,150 \\ - \quad 239,089 \\ \hline \end{array}$$

f.
$$\begin{array}{r} 294,150 \\ - \quad \quad 96,400 \\ \hline \end{array}$$

g.
$$\begin{array}{r} 800,500 \\ - \quad 79,989 \\ \hline \end{array}$$

h.
$$\begin{array}{r} 800,500 \\ - \quad 45,500 \\ \hline \end{array}$$

i.
$$\begin{array}{r} 800,500 \\ - \quad 276,664 \\ \hline \end{array}$$

Use tape diagrams and the standard algorithm to solve the problems below. Check your answers.

2. A fishing boat was out to sea for 6 months and traveled a total of 8,578 miles. In the first month, the boat traveled 659 miles. How many miles did the fishing boat travel during the remaining 5 months?

3. A national monument had 160,747 visitors during the first week of September. A total of 759,656 people visited the monument in September. How many people visited the monument in September after the first week?
4. Shadow Software Company earned a total of \$800,000 selling programs during the year 2012. \$125,300 of that amount was used to pay expenses of the company. How much profit did Shadow Software Company make in the year 2012?
5. At the local aquarium, Bubba the Seal ate 25,634 grams of fish during the week. If, on the first day of the week, he ate 6,987 grams of fish, how many grams of fish did he eat during the remainder of the week?

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Draw a tape diagram to model each problem and solve.

1. $956,204 - 780,169 =$ _____

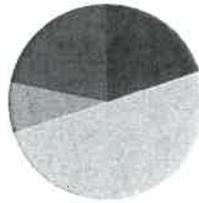
2. A construction company was building a stone wall on Main Street. 100,000 stones were delivered to the site. On Monday, they used 15,631 stones. How many stones remain for the rest of the week? Write your answer as a statement.

Lesson 16

Objective: Solve two-step word problems using the standard subtraction algorithm fluently modeled with tape diagrams, and assess the reasonableness of answers using rounding.

Suggested Lesson Structure

■ Fluency Practice	(12 minutes)
■ Application Problem	(5 minutes)
■ Concept Development	(30 minutes)
■ Student Debrief	(13 minutes)
Total Time	(60 minutes)



Fluency Practice (12 minutes)

- Sprint: Convert Meters and Centimeters to Centimeters **4.MD.1** (8 minutes)
- Compare Numbers **4.NBT.2** (4 minutes)

Sprint: Convert Meters and Centimeters to Centimeters (8 minutes)

Materials: (S) Convert Meters and Centimeters to Centimeters Sprint

Note: Reviewing unit conversions that were learned in Grade 3 helps to prepare students to solve problems with meters and centimeters in Module 2, Topic A.

Compare Numbers (4 minutes)

Materials: (S) Personal white board

Note: Reviewing this concept helps students work toward mastery of comparing numbers.

T: (Project 342,006 _____ 94,983.) On your personal white boards, compare the numbers by writing the greater than, less than, or equal symbol.

S: (Write $342,006 > 94,893$.)

Repeat with the following possible sequence: 7 thousands 5 hundreds 8 tens _____ 6 ten thousands 5 hundreds 8 ones, and 9 hundred thousands 8 thousands 9 hundreds 3 tens _____ 807,820.

B

Number Correct: _____

Improvement: _____

Convert Meters and Centimeters to Centimeters

1.	1 m =	cm
2.	2 m =	cm
3.	3 m =	cm
4.	7 m =	cm
5.	5 m =	cm
6.	9 m =	cm
7.	4 m =	cm
8.	8 m =	cm
9.	6 m =	cm
10.	1 m 10 cm =	cm
11.	1 m 20 cm =	cm
12.	1 m 30 cm =	cm
13.	1 m 70 cm =	cm
14.	1 m 75 cm =	cm
15.	1 m 65 cm =	cm
16.	1 m 64 cm =	cm
17.	1 m 53 cm =	cm
18.	1 m 42 cm =	cm
19.	2 m 42 cm =	cm
20.	8 m 42 cm =	cm
21.	5 m 29 cm =	cm
22.	3 m 89 cm =	cm

23.	1 m 1 cm =	cm
24.	1 m 2 cm =	cm
25.	1 m 3 cm =	cm
26.	1 m 9 cm =	cm
27.	2 m 9 cm =	cm
28.	3 m 9 cm =	cm
29.	7 m 9 cm =	cm
30.	7 m 4 cm =	cm
31.	4 m 8 cm =	cm
32.	6 m 3 cm =	cm
33.	9 m 5 cm =	cm
34.	2 m 50 cm =	cm
35.	3 m 85 cm =	cm
36.	6 m 31 cm =	cm
37.	6 m 7 cm =	cm
38.	4 m 60 cm =	cm
39.	7 m 25 cm =	cm
40.	4 m 13 cm =	cm
41.	6 m 2 cm =	cm
42.	10 m 3 cm =	cm
43.	10 m 30 cm =	cm
44.	11 m 48 cm =	cm

3. Martin's car had 86,456 miles on it. Of that distance, Martin's wife drove 24,901 miles, and his son drove 7,997 miles. Martin drove the rest.
- About how many miles did Martin drive? Round each value to estimate.
 - Exactly how many miles did Martin drive?
 - Assess the reasonableness of your answer in (b). Use your estimate from (a) to explain.

4. A class read 3,452 pages the first week and 4,090 more pages in the second week than in the first week. How many pages had they read by the end of the second week? Is your answer reasonable? Explain how you know using estimation.
5. A cargo plane weighed 500,000 pounds. After the first load was taken off, the airplane weighed 437,981 pounds. Then 16,478 more pounds were taken off. What was the total number of pounds of cargo removed from the plane? Is your answer reasonable? Explain.

2. During the first quarter of the year, 351,875 people downloaded an app for their smartphones. During the second quarter of the year, 101,949 fewer people downloaded the app than during the first quarter. How many downloads occurred during the two quarters of the year?
- Round each number to the nearest hundred thousand to estimate how many downloads occurred during the first two quarters of the year.
 - Determine exactly how many downloads occurred during the first two quarters of the year.
 - Determine if your answer is reasonable. Explain.

3. A local store was having a two-week Back to School sale. They started the sale with 36,390 notebooks. During the first week of the sale, 7,424 notebooks were sold. During the second week of the sale, 8,967 notebooks were sold. How many notebooks were left at the end of the two weeks? Is your answer reasonable?

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Quarterback Brett Favre passed for 71,838 yards between the years 1991 and 2011. His all-time high was 4,413 passing yards in one year. In his second highest year, he threw 4,212 passing yards.

1. About how many passing yards did he throw in the remaining years? Estimate by rounding each value to the nearest thousand and then compute.

2. Exactly how many passing yards did he throw in the remaining years?

3. Assess the reasonableness of your answer in (b). Use your estimate from (a) to explain.