

Objectives

- Demonstrate an understanding of subtracting money
- Round amounts of money to the place with the greatest value
- Solve money word problems
- Solve a multi-step word problem
- Read a menu

Teacher Materials

- Money Kit
- Money Word Problems transparency, page IA14 (CD)
- Division flashcards: 4 as a divisor, and previously reviewed division facts

Student Materials

- Money Kit
- Number Cards: 0–9

Practice and Review

Ordinal positions

Review *first* through *ninety-ninth*. Ask questions similar to these.

- **If you are fifteenth in line at the water fountain, how many people are in front of you?**
- **Mandy just ate her twelfth grape. How many grapes has she eaten?**
- **What row comes after the forty-seventh row?**

Division facts: 4 as a divisor

Use the division flashcards and Number Cards 0–9 to review facts with 4 as a divisor and division facts reviewed in previous lessons.

Introduce the Lesson

A cormorant is another kind of large seabird. God created cormorants with webbed feet, allowing these birds to be excellent swimmers. They can dive into the water and catch fish while swimming underwater. They also have a pouch in which to hold the fish they catch.

People in Asia use cormorants to catch fish. A trainer places a ring around the bird's neck to keep it from swallowing the fish it catches. The cormorant brings the fish back to the trainer for a reward.

Teach for Understanding

Demonstrate an understanding of subtracting money

1. Distribute the Money Kits. Write $\$3.00 - \$1.79 = \underline{\quad}$ in vertical form for display.
2. Direct the students to place 3 one-dollar bills on their desks as you display 3 one-dollar bills.
 - **When adding or subtracting money, what coins can we use to show the value of tenths and hundredths? Why? *Dimes and pennies; elicit that a dime is one tenth of a dollar and a penny is one hundredth of a dollar.***
 - **Which place do you subtract first? *Hundredths or pennies***

- **Do you have any pennies to subtract from? *no* What must you do? *Rename 1 dollar as 10 dimes and then rename 1 dime as 10 pennies.***
3. Demonstrate as you guide the students in renaming 1 dollar as 10 dimes and then renaming 1 dime as 10 pennies.
 - **How many dollar bills do you have now? *2 dimes? 9 pennies? 10***
 4. Cross out the 3 and write 2 above the Ones place of the problem. Cross out the 0 in the Tenths place and write 10 above it, and then cross out the 10 and write 9 above it. Cross out the 0 in the Hundredths place and write 10 above it.
 - **Subtract the pennies. How many are left? *1*** Write 1 in the Hundredths place.
 - **Subtract the dimes. How many are left? *2*** Write 2 in the Tenths place.
 - **What do you write to separate the dollars from the cents? *decimal point*** Write a decimal point in the answer.
 - **Subtract the dollars. How many are left? *1*** Write 1 in the Ones place.
 - **Is this answer complete? *no* What else do you need? *dollar sign*** Write a dollar sign in the answer.
 - **What does $\$3.00 - \1.79 equal? *\\$1.21***
 5. Repeat the procedure using these problems.

$\$5.05$	$\$10.92$	$\$6.00$
$-\ \$2.49$	$-\ \$3.63$	$-\ \$3.10$
$\$2.56$	$\$7.29$	$\$2.90$

Round amounts of money to the place with the greatest value

1. Write \$7.75 for display.
 - **What 2 whole dollar amounts is \$7.75 between? *\\$7.00 and \\$8.00***
 - **What is half of \$1.00? *\\$0.50***
2. Remind the students that they can think of the halfway point, \$0.50, between 2 whole dollar amounts when rounding amounts of money to the nearest dollar.
 - **Is \$7.75 closer to \$7.00 or \$8.00? *\\$8.00* How do you know? *\\$0.75 is more than \\$0.50***
3. Write \$23.89 for display.
 - **If you are going to round \$23.89 to the place with the greatest value, which place do you round to? *Tens***
 - **What 2 ten-dollar amounts is \$23.89 between? *\\$20.00 and \\$30.00* How do you know? *\\$23.89 is more than \$20.00 but less than \$30.00***
 - **When the digit 3 is immediately to the right of the rounding digit, do you round up or down? *round down***
 - **Does \$23.89 round down to \$20.00 or up to \$30.00? *down to \$20.00* How do you know? *Possible answers: 3 is to the right of the rounding digit; \$23.89 is less than \$25.00, the halfway point between \$20.00 and \$30.00.***
4. Write $\$76.41 - \$31.95 = \underline{\quad}$ in vertical form as shown. (Do not write the estimates or answer yet.)

$\$80.00$	←	$\$76.41$
$-\ \$30.00$	←	$-\ \$31.95$
$\$50.00$		$\$44.46$
5. Guide the students in finding the estimated difference and the exact difference. Follow a procedure similar to the one in Lesson 18, asking these questions.
 - **$\$76.41$ rounds to what ten-dollar amount? *\\$80.00***

Subtract Money

Name _____

Estimate by rounding to the place with the greatest value. Solve.

1. **Estimate**

$$\begin{array}{r} \$40.00 \\ - \$10.00 \\ \hline \$30.00 \end{array}$$

$$\begin{array}{r} \\ \\ \\ \\ \$36.07 \\ - \$12.58 \\ \hline \$23.49 \end{array}$$

2. **Estimate**

$$\begin{array}{r} \$900.00 \\ - \$700.00 \\ \hline \$200.00 \end{array}$$

$$\begin{array}{r} \\ \\ \\ \\ \\ \\ \$900.50 \\ - \$694.75 \\ \hline \$205.75 \end{array}$$

Subtract.

3.
$$\begin{array}{r} \$7.46 \\ - \$2.84 \\ \hline \$4.62 \end{array}$$

4.
$$\begin{array}{r} \$85.00 \\ - \$27.59 \\ \hline \$57.41 \end{array}$$

5.
$$\begin{array}{r} \$704.90 \\ - \$377.85 \\ \hline \$327.05 \end{array}$$

6.
$$\begin{array}{r} \$620.30 \\ - \$437.05 \\ \hline \$183.25 \end{array}$$

Use the information below to solve and label.



7. The Larsons bought a camp stove and a lantern. What was the cost of both items?

$$\$79.49 + \$69.89 = \$149.38$$

8. The Blakes bought the dome tent on sale for \$165.99. How much did they save?

$$\$187.95 - \$165.99 = \$21.96$$

9. Mr. Jones paid for a 5-gallon cooler with a 50-dollar bill. How much change did he receive?

$$\$50.00 - \$24.99 = \$25.01$$

10. Mrs. Hayes bought a first-aid kit and a set of flashlights. What was the total cost?

$$\$12.75 + \$19.39 = \$32.14$$

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- **\$31.95 rounds to what ten-dollar amount?** $\$30.00$
- **About how many dollars do you have left?** $\$50.00$

6. Repeat the procedure using these problems.

$$\begin{array}{r} \$300.00 \\ - \$100.00 \\ \hline \$200.00 \end{array} \leftarrow \begin{array}{r} \$297.85 \\ - \$114.50 \\ \hline \$183.35 \end{array} \quad \begin{array}{r} \$40.00 \\ - \$30.00 \\ \hline \$10.00 \end{array} \leftarrow \begin{array}{r} \$42.25 \\ - \$28.75 \\ \hline \$13.50 \end{array}$$

Solve money word problems

- Display the Money Word Problems transparency and discuss the menu.
- Choose a student to read aloud the first word problem.
 - **What is the question asking you to find?** *how much change Captain Bailey received*
 - **What information do you need?** *the cost of a hamburger, \$2.59, and the amount of money Captain Bailey gave the cashier, \$5.00*
 - **What operation do you use?** *subtraction*
 - **What is your equation?** $\$5.00 - \$2.59 = \underline{\quad}$
- Write the equation for display. Direct the students to solve it on paper.
- Choose a student to write his solution and explain how he solved the problem. Guide the explanation as needed.
 - **How much change did Captain Bailey receive?** $\$2.41$
 Complete the equation.
- Repeat the procedure for word problems 2 and 3.

$$\$2.25 - \$0.89 = \$1.36 \text{ and } \$2.29 + \$1.29 + \$0.99 = \$4.57$$

Solve a multi-step word problem

- Choose a student to read aloud the last word problem.
 - **What is the question asking you to find?** *how much change Mendoza received*

Add.

1.
$$\begin{array}{r} 56,419 \\ + 28,568 \\ \hline 84,987 \end{array}$$

2.
$$\begin{array}{r} 29,274 \\ + 43,488 \\ \hline 72,762 \end{array}$$

3.
$$\begin{array}{r} 2,436 \\ 3,355 \\ + 3,684 \\ \hline 9,475 \end{array}$$

4.
$$\begin{array}{r} 1,986 \\ 4,218 \\ + 6,314 \\ \hline 12,518 \end{array}$$

Write the related subtraction equation. Write the value for b .

5. $65 + b = 100$ $100 - 65 = 35$ $b = 35$

6. $316 + b = 730$ $730 - 316 = 414$ $b = 414$

7. $497 + b = 816$ $816 - 497 = 319$ $b = 319$

Estimate by rounding to the place with the greatest value. Solve.

8. **Estimate**

$$\begin{array}{r} \$8.00 \\ - \$4.00 \\ \hline \$4.00 \end{array}$$

$$\begin{array}{r} \\ \\ \\ \$8.26 \\ - \$3.88 \\ \hline \$4.38 \end{array}$$

9. **Estimate**

$$\begin{array}{r} \$70.00 \\ - \$40.00 \\ \hline \$30.00 \end{array}$$

$$\begin{array}{r} \\ \\ \\ \$72.06 \\ - \$39.53 \\ \hline \$32.53 \end{array}$$

Subtract.

10.
$$\begin{array}{r} \$75.26 \\ - \$46.19 \\ \hline \$29.07 \end{array}$$

11.
$$\begin{array}{r} \$25.00 \\ - \$17.83 \\ \hline \$7.17 \end{array}$$

12.
$$\begin{array}{r} \$600.43 \\ - \$212.62 \\ \hline \$387.81 \end{array}$$

13.
$$\begin{array}{r} \$50.00 \\ - \$27.89 \\ \hline \$22.11 \end{array}$$

Add parentheses to show grouping 10. Solve. **Grouping for #14 may vary.**

14. $(7 + 3) + 7 = 17$ 15. $5 + (6 + 4) = 15$ 16. $(1 + 9) + 4 = 14$

Solve and label.

17. Matthew wanted to make a model of a Spanish ship. He bought a model kit for \$189.99 and a display case for \$49.85. What was the total cost?

$$\$189.99 + \$49.85 = \$239.84$$



Complete **Daily Review** on page 59.

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Math 4 Worktext, Chapter 2, Lesson 21

- **How would you solve this problem?** *Find out how much the special meal offer and the milkshake cost and then subtract that total from the \$20.00 he paid.*
 - **How many equations do you need to solve the problem?** **2**
- Remind the students that when 2 or more equations are needed to solve a word problem, it is called a multi-step problem.
 - **What information is given to find the total cost of the meal and milkshake?** *The special meal offer is \$12.95, and the milkshake costs \$2.25.*
 - **What operation do you use?** *addition*
 - **What is your equation?** $\$12.95 + \$2.25 = \underline{\quad}$
 - Write the equation for display. Direct the students to solve it on paper.
 - **What is the total cost of the food?** $\$15.20$
 - Complete the equation.
 - **Now that you know the cost of the food, what can you do next?** *find out how much change Mendoza received*
 - **What information do you need?** *Mendoza paid \$20.00, and the food cost \$15.20.*
 - **What operation do you use?** *subtraction*
 - **What is your equation?** $\$20.00 - \$15.20 = \underline{\quad}$
 - Write the equation and direct the students to solve it.
 - **How much change did Mendoza receive?** $\$4.80$



Worktext pages 49–50, 59 (h)