

Objectives

- Develop an understanding of decimals: tenths
- Rename 10 tenths as 1 one
- Read and write decimals to the Tenths place

Teacher Materials

- Place Value Pocket Chart
- Place Value Kit
- Decimal Place Value Pocket Chart Kit
- Fact family flashcards: 7-7-14, 6-8-14, 5-9-14, and previously memorized facts

Student Materials

- Place Value Kit
- Decimal Place Value Pocket Chart Kit

Note

In Lessons 7 and 8, the red side (the back) of the hundreds will be referred to as the *ones*, the orange side of the tens as the *tenths*, and the purple side of the ones as the *hundredths*. These two lessons also include the use of the Tenths Square (a large orange square divided into tenths) and the Hundredths Square (a large purple square divided into hundredths) as well as the Tenths Mat (a large white square divided into tenths) and the Hundredths Mat (a large white square divided into hundredths).

Practice and Review

Fact families: 7-7-14, 6-8-14, 5-9-14

Use fact family flashcards to review the addition and subtraction facts in these fact families and those from previous lessons.

Teach for Understanding

Develop an understanding of tenths

Rename 10 tenths as 1 one

1. Display the Place Value Pocket Chart. Lead a discussion to review our place value system. Explain that it is a base 10 system in which each number is a whole number and that the system is set up in periods with a Ones, a Tens, and a Hundreds place in each period. Point out that as you move left from the Ones place, each place is ten times greater than the place immediately to its right—10 smaller units equal 1 of the next larger unit to its left.
2. Distribute the Place Value Kits. Guide the students in using 10 smaller units to form the next larger unit: 10 ones = 1 ten, 10 tens = 1 hundred, 10 hundreds = 1 one thousand. Demonstrate each step.
 - **Which unit did we begin with to make the next larger unit?** *ones*
3. Explain that the ones, the smallest whole number unit, is the base unit for forming numbers of greater value in our place value system.
 - **How do you think we can make smaller units from a larger unit in a base 10 system?** *Elicit that we rename one larger unit as 10 smaller units.*
4. Guide the students in renaming 1 larger unit as 10 smaller units: 1 one thousand = 10 hundreds, 1 hundred = 10 tens, 1 ten = 10 ones.

► **How do you think you can show a number that is less than 1 in a base 10 system?** *Elicit that you can rename 1 one as 10 smaller units.*

5. Display the red back of 1 hundred. Explain that you will use the large red square to represent 1 one; it is the same color as the smaller one square and will have the same value.
 - **Think about what you have learned about renaming in our base 10 place value system. How many smaller units will you rename this 1 one as? Why?** *10; elicit that our place value system is based on renaming 10 smaller units as 1 larger unit and renaming 1 larger unit as 10 smaller units.*
6. Point out the orange back of 1 ten. Explain that when you rename 1 one as 10 smaller units, each smaller unit is called a *tenth*.
7. Demonstrate as you guide the students in placing 10 orange tenths on the large red one. Lead in counting each tenth as you place it on the one: *1 tenth, 2 tenths, . . . 10 tenths.*

► **How many tenths equal 1 one?** *10 tenths*

► **Does this show that what you know about the base 10 place value system is true? How do you know?** *Yes; it takes 10 smaller units to make 1 of the next larger unit: 10 tenths = 1 one. Elicit that the reverse of this is also true: 1 one = 10 tenths.*

Display the large red one and the orange Tenths Square from your Place Value Kit. Explain that they are equal: 1 one can be renamed as 10 tenths and 10 tenths can be renamed as 1 one.

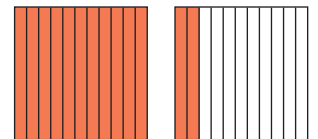
8. Display the orange Tenths Square and 2 tenths on the white Tenths Mat to the right of the Tenths Square. Direct the students to do the same.

► **How many tenths are shown?**

12 tenths

► **How could you rename 12 tenths?** *1 one and 2 tenths*


9. Repeat the procedure for 15 tenths. *1 one and 5 tenths*



Read and write decimals to the Tenths place

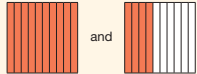
1. Display the Place Value Pocket Chart and the Decimal Place Value Pocket Chart.
 - **What differences do you notice between these two pocket charts?** *Answers will vary, but elicit that the Decimal Place Value Pocket Chart has a Tenths place and a Hundredths place, and there is a dot between the Ones and the Tenths places.*
2. Point to the decimal point on the Decimal Place Value Pocket Chart. Explain that the *decimal point* marks the Ones place which is the center of our number system and separates the whole numbers from the numbers that represent parts of a whole (e.g., tenths). Point out that whole numbers are written to the left of the decimal point, and numbers that represent parts of a whole are written in the decimal places to the right of the decimal point.
 - **Can you show 3 tenths on both pocket charts? Why?** *No; only the Decimal Place Value Pocket Chart has a place to show 3 tenths or a value that is less than 1.*
 - **How can you “write” 3 tenths using the Decimal Place Value Pocket Chart?** *Elicit by putting a 3 in the Tenths place.*
3. Place a 3 in the Tenths place of the Decimal Place Value Pocket Chart and lead the students in reading *3 tenths*.

Decimals



0.4
four tenths

and











1.4
one and four tenths

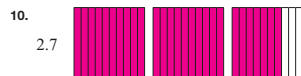
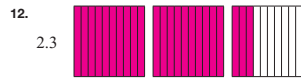
Ones	Tenths
1	4

The decimal point marks the Ones place.

Write the decimal.

1.  <u>0.6</u>	2.  <u>0.2</u>	3.  <u>0.9</u>	4.  <u>0.1</u>
5.  <u>0.5</u>	6.  <u>0.7</u>	7.  <u>0.8</u>	8.  <u>1</u> or 1.0





Color to show the decimal.

9. 1.3 	10. 2.7 
11. 0.9 	12. 2.3 

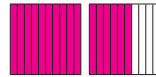
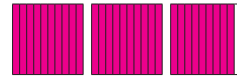
Write the number in standard form.

13. six and one tenth = <u>6.1</u>	14. three and four tenths = <u>3.4</u>
15. eight tenths = <u>0.8</u>	16. one and nine tenths = <u>1.9</u>

Write the decimal.

1.  <u>0.4</u>	2.  <u>0.8</u>	3.  <u>0.1</u>	4.  <u>0.5</u>
--	--	--	--

Color to show the decimal.

5. 1.6 	6. 2.9 
---	--

Write the number in standard form.

7. three tenths = <u>0.3</u>	8. five and seven tenths = <u>5.7</u>
9. two and six tenths = <u>2.6</u>	10. five tenths = <u>0.5</u>

Write the value of the underlined digit.

11. 165,342 <u>60,000</u>	12. 9,862,431 <u>9,000,000</u>
13. 57,986 <u>900</u>	14. 346,215 <u>300,000</u>
15. 1,374,012 <u>4,000</u>	16. 65,908 <u>0</u>

Round to the place with the greatest value.

17. <table style="border: 1px solid black; padding: 5px; width: 150px;"> <tr><td style="border: 1px solid black; padding: 2px;">4,893</td></tr> <tr><td style="padding: 2px;">4,000</td></tr> <tr><td style="border: 1px solid black; padding: 2px; border-radius: 50%; text-align: center;">5,000</td></tr> </table>	4,893	4,000	5,000	18. <table style="border: 1px solid black; padding: 5px; width: 150px;"> <tr><td style="border: 1px solid black; padding: 2px;">92,785</td></tr> <tr><td style="padding: 2px;">90,000</td></tr> <tr><td style="padding: 2px;">100,000</td></tr> </table>	92,785	90,000	100,000
4,893							
4,000							
5,000							
92,785							
90,000							
100,000							
19. <table style="border: 1px solid black; padding: 5px; width: 150px;"> <tr><td style="border: 1px solid black; padding: 2px;">31,869</td></tr> <tr><td style="padding: 2px;">30,000</td></tr> <tr><td style="padding: 2px;">40,000</td></tr> </table>	31,869	30,000	40,000	20. <table style="border: 1px solid black; padding: 5px; width: 150px;"> <tr><td style="border: 1px solid black; padding: 2px;">793,021</td></tr> <tr><td style="padding: 2px;">700,000</td></tr> <tr><td style="border: 1px solid black; padding: 2px; border-radius: 50%; text-align: center;">800,000</td></tr> </table>	793,021	700,000	800,000
31,869							
30,000							
40,000							
793,021							
700,000							
800,000							

Complete **Daily Review** on page 27.

► When we write 3 tenths, what is the value of the Ones place? 0

Place a zero in the Ones place of the Decimal Place Value Pocket Chart. Explain that since the decimal point marks the Ones place, when there are no ones in a decimal, you write a zero in the Ones place, but the zero is not read.

► How would you write 3 tenths as a decimal on paper? 0.3

Write 3 tenths = 0.3 for display.

- Distribute the Decimal Place Value Pocket Chart Kits. Repeat the procedure for one tenth 0.1, six tenths 0.6, and four tenths 0.4. Direct the students to “write” the decimals in their pocket charts and on paper.

► Can you have 10 tenths in the Tenths place of the pocket chart? Why? No; elicit that when writing a number, only one digit can occupy a place at a time: 10 tenths must be renamed as 1 one.

► How would you “write” 10 tenths in your pocket chart? Elicit by placing 1 in the Ones place; accept by placing 1 in the Ones place and 0 in the Tenths place.

- Direct attention to Worktext page 15. Guide the students in completing numbers 1–8.

- Write *Word Form* and *Standard Form* for display.

- Write *twelve tenths* below the *Word Form* heading and display 12 tenths from your Place Value Kit (the Tenths Square and 2 tenths on the Tenths Mat).

► Can you write 12 tenths in the Tenths place? no What must you do? Rename 10 tenths as 1 one.

Demonstrate renaming the Tenths Square as 1 one to show 1 one and 2 tenths.

After *twelve tenths* written for display, write = one and two tenths.

- Direct each student to “write” the standard form for 1 and 2 tenths in his pocket chart. *1.2, 1 in the Ones place and 2 in the Tenths place* Explain that when there is a number other than zero to the left of the decimal point, the decimal point is read as *and*.

Write 1.2 below the *Standard Form* heading. Point to each digit and the decimal point as you lead in reading the decimal, *one and two tenths*, emphasizing the word *and*.

- Repeat the procedure for 27 tenths *2 ones and 7 tenths, 2.7* and 9 tenths *9 tenths, 0.9*.
- Guide the students in completing numbers 9–16 on Worktext page 15.

