3 Develop the Concept: Visual

ELL STRATEGY Visual Learning

Visual Learning

Decimal Place Value

How can you represent decimals?

Orchid seeds are extremely small. A single orchid seed can weigh only 0.000035 ounce.

What are some different ways you can represent 0.000035?

What are the different ways to write numbers? [Standard form, word form, and expanded form]

1 Visual Learning

Set the Purpose Call students' attention to the **Visual Learning Bridge** at the top of the page. ***In this lesson, you will learn how to write decimals in standard form, word form, and expanded form through millionths, identify the value of digits, and name equivalent decimals.***

DIGITAL **Animated Glossary** Students can see highlighted words defined in the Online Student Edition.

equivalent decimals

www.pearsonsuccessnet.com

Another Example

Using place-value blocks or grids for decimals requires defining what "1 whole" means. If a ten-by-ten square is 1 whole, then 1 row of 10 small squares is 0.1, and 1 small square is 0.01. ***How can a grid or place-value blocks help to show that 1.4 and 1.40 are equal?*** [Sample answer: We can color grids to show that both numbers will have 1 whole ten-by-ten square colored and 4 columns or 40 small squares colored.]

2 Guided Practice

Formative Assessment

Remind students that the place of a digit in a decimal determines its value.

Exercise 7

Error Intervention

If students have difficulty understanding the values of the digits in a number,

then say: ***Each digit has a value based on its place in the number. For example, the 4 is in the tenths place and its value is 4 tenths. The 5 is in the hundredths place so its value is 5 hundredths.***

Reteaching For another example and more practice, assign **Reteaching** Set C on page 21.

Lesson 1-3

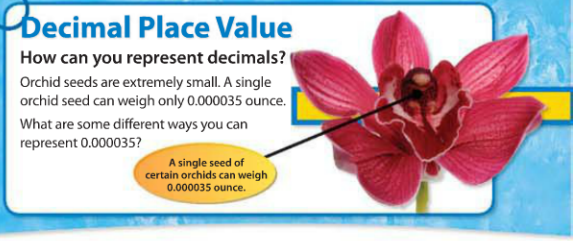
Understand It! Numbers less than 1 can be written using decimal place value.

Decimal Place Value

How can you represent decimals?

Orchid seeds are extremely small. A single orchid seed can weigh only 0.000035 ounce.

What are some different ways you can represent 0.000035?



Another Example What are equivalent decimals?

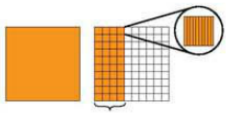
Equivalent decimals name the same amount.

Name two other decimals equivalent to 1.4.

One and four tenths is the same as one and forty hundredths.
So, 1.4 = 1.40.

One and four tenths is the same as one and four hundred thousandths.
So, 1.4 = 1.400.

So, 1.4 = 1.40 = 1.400.



Guided Practice*

Do you know HOW?

Write the word form for each number and give the value of the underlined digit.
1–2 See margin.

1. 4.737
2. 9.806415

Write each number in standard form.

3. 6 + 0.6 + 0.03 + 0.007 + 0.0001
   6.6371
4. four and sixty-eight hundredths
   4.68

Write two decimals that are equivalent to the given decimal.
Sample answers are given.

5. 3.700
   3.7, 3.70
6. 5.60
   5.6, 5.600

Do you UNDERSTAND?

7. **Writing to Explain** The number 3.453 has two 3s. Why does each 3 have a different value?
   See margin.
8. How do you read the decimal point in word form?
   The decimal is read as *and*.
9. José finished a race in 2.6 hours and Pavel finished the same race in 2.60 hours. Which runner finished the race first? See margin.

DIGITAL Animated Glossary, eTools www.pearsonsuccessnet.com

10 *For another example, see Set C on page 21.

1. four and seven hundred thirty-seven thousandths; 3 hundredths or 0.03
2. nine and eight hundred six thousand, four hundred fifteen millionths; 4 ten-thousandths or 0.0004
7. The first 3 is in the ones place, the second 3 is in the thousandths place.
9. The runners finished the race at the same time. 2.6 is equivalent to 2.60.