

Read and Write Decimals

Standard

5.2.A Represent the value of the digit in decimals through the thousandths using expanded notation and numerals.

Prerequisite Standards

3.2.A Compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate.

4.2.A Interpret the value of each place-value position as 10 times the position to the right and as one-tenth of the value of the place to its left.

4.2.B Represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals.

Overview of Tested Skills

Problems on this assessment form require students to be able to read and write decimals to the thousandths place using base-ten numerals, number names, and expanded form using both fractions and decimals, and to solve word problems involving decimals. Students will also need to be familiar with multiplying and dividing by ten and solving problems involving multiplication and division by ten.

Common Misconceptions and Errors

Misconceptions and errors may result if students don't understand the relationship between place value, base-ten numerals, and number names, or that $\frac{1}{10}$ indicates tenths, $\frac{1}{100}$ indicates hundredths, and $\frac{1}{1,000}$ indicates thousandths.

Errors may also result if students:

- write the digits of a decimal number in the incorrect columns of a place-value chart.
- write two digits in one column of a place-value chart.
- multiply or divide a decimal by ten incorrectly.
- identify the least place value of a decimal incorrectly.
- write a decimal with the 0 in the tenths or hundredths place incorrectly.

Ready & i-Ready Instructional Resources

Consider using the following resources and the Learning Games* as additional instructional resources for students who have placed on or above level in Number and Operations. See additional recommendations on page 2 for students performing below grade level. Additional lessons can also be found in STAAR Ready.

Beginning

Focus: Developing Underlying Concepts

Help students apply their knowledge of decimal place value to read and write decimals to the thousandths place in standard form, word form, and expanded form. Connect the value of each digit in a decimal to the value of the equivalent fraction. Then help students identify the least place value in a decimal number and use it to determine the value of the fractional part.

Teacher-led Small Group

Toolbox: Ready Instruction

Grade 5, Lesson 3

- Read and Write Decimals

i-Ready: Tools for Instruction

Number and Operations, Level 5

- Read and Write Decimals to Thousandths

Toolbox: Interactive Tutorial

Grade 5, Lesson 3

- Read and Write Decimals

Student-led Small Group

Toolbox: Center Activities

Grade 5, Lesson 3

- 5.11 ★ Decimal Number Forms

Progressing

Focus: Practice and Building Confidence

Help students pay careful attention to the words and the numbers in each problem. Build confidence with independent practice representing decimal numbers using place-value charts, number names, base-ten numerals, and expanded form.

Independent

Toolbox: Ready Practice and Problem Solving

Grade 5, Lesson 3

- Read and Write Decimals

i-Ready: Instruction

Level E

- Read and Write Decimals

Student-led Small Group

Toolbox: Center Activities

Grade 5, Lesson 3

- 5.11 ★★ Decimal Number Forms

Proficient

Focus: Deepening Understanding

Encourage students to deepen their understanding of reading and writing different forms of decimal numbers.

Student-led Small Group

Toolbox: Center Activities

Grade 5, Lesson 3

- 5.11 ★★★ Decimal Number Forms

* Learning Games are included with i-Ready Instruction

Ready & i-Ready Instructional Resources (continued)

i-Ready Diagnostic

If any of your students are placing one or two grade levels below in Number and Operations, please first consider using recommendations in the Diagnostic reports. The instructional resources below can then be used to provide additional small group and individualized support for students performing at these levels.

One Grade Level Below

Students may be having difficulty with the skills and concepts involving base-ten numbers and may struggle with understanding place value. Challenges with place value often relate to not understanding that the value of each digit is based on its position in the number, and that a digit in one place has ten times the value it would have in the place to its right.

These students will benefit from additional instruction and practice with:

- comparing the value of a digit in one place to the value it would have in the place to its right.
- reading and writing multi-digit whole numbers using the word form, standard form, and expanded form.
- using concrete or visual models to reinforce the value that each place represents.

Teacher-led Small Group

Toolbox: Ready Instruction

Grade 4, Lesson 1

- Understand Place Value

i-Ready: Tools for Instruction

Number and Operations, Level 4

- Place Value through Hundred Millions

Toolbox: Interactive Tutorial

Grade 4, Lesson 1

- Understand Place Value

Student-led Small Group

Toolbox: Center Activities

Grade 4, Lesson 1

- 4.16 ★★ Expanded Form and Place Value

Independent

Toolbox: Ready Practice and Problem Solving

Grade 4, Lesson 1

- Understand Place Value

Two Grade Levels Below

Students may be having difficulty with the skills and concepts involving base-ten numbers and may struggle with understanding place value. Challenges with place value often relate to not understanding the relationship between the hundreds, tens, and ones places.

These students will benefit from additional instruction and practice with:

- rounding whole numbers to the nearest ten or hundred.
- multiplying single digit numbers by 10 and by multiples of 10.
- using concrete or visual models to reinforce the value that each place represents.

Teacher-led Small Group

Toolbox: Ready Instruction

Grade 3, Lesson 8

- Use Place Value to Round Numbers

i-Ready: Tools for Instruction

Number and Operations, Level 3

- Rounding to the Nearest Ten or Hundred

Toolbox: Interactive Tutorial

Grade 3, Lesson 8

- Use Place Value to Round Numbers

Student-led Small Group

Toolbox: Center Activities

Grade 3, Lesson 8

- 3.2 ★★ Round Numbers

Independent

Toolbox: Ready Practice and Problem Solving

Grade 3, Lesson 8

- Use Place Value to Round Numbers