

Mathematics: Number and Operations in Base Ten

5.NBT.3	<p>Cluster Heading: 5.NBT.A Understand the place value system.</p> <p>Content Standard(s): 5.NBT.3 Read, write, and compare decimals to thousandths. a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$. b. Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p> <p>Practice Standard(s): MP.3 Construct viable arguments and critique the reasoning of others, MP.7 Look for and make use of structure.</p>	
Problem/Task Suggestions		Formative Assessment Suggestions
<p>Decimal Clue Conundrum Materials needed: Number cards 0-9 (1 set/student), Decimal point and direction cards (1/student), and Decimal Clue cards (1 set/group)</p> <p>Students work in groups of 3. Each student needs a number card 0-9, a decimal point card, and a directions card. Each group needs a set of Decimal Clue cards to share (set face down in center of group). Each student takes a Decimal Clue card. The students use their number cards to create a decimal according to their clues. When everyone in the group has built their decimal, students take turns explaining their clues and answers. Groups discuss whether they agree or disagree. Then, students put their 3 clues together and create a decimal that fits all 3 clues. Have students record their answer on a record sheet or white board using 3 additional representations (fraction, in words, as a picture, on a number line, in expanded form). Have groups share out, and start over with 3 new clue cards.</p> <p>Differentiation</p> <p>Supports</p> <ul style="list-style-type: none"> • Have group choose 2 clue cards to put together instead of 3. • Allow use of manipulatives. • Provide an example of each representation for students to refer to during the task. <p>Extensions</p> <ul style="list-style-type: none"> • Have students create a clue they could add to the set to make the decimal impossible. 		<p>Observations of Students Does the student</p> <ul style="list-style-type: none"> • Know how to compose decimals in between two numbers? • Use comparison and place value to compose decimals? • Know how to represent decimals in many ways? <p>Questions to Guide Student Thinking</p> <ul style="list-style-type: none"> • How did you figure out this decimal fits the clue? • How can you prove this decimal makes sense? • How could your answer be different if this clue was removed? <p>Misconceptions Students may</p> <ul style="list-style-type: none"> • Have difficulty comparing decimals. • Have difficulty representing the decimal in 3 ways. <p>Vocabulary Considerations Tenths, hundredths, thousandths, place value, greater than, less than, numeral, expanded form</p>
<p>Source: North Carolina Department of Public Instruction - Fifth Grade http://maccss.ncdpi.wikispaces.net/file/view/CCSSMathTasks-Grade5.pdf/375611936/CCSSMathTasks-Grade5.pdf</p>		