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| Date: | | | Duration of Lesson: 30 minutes | |
| Title of Unit: Decimals | | | Title of Lesson: Dividing Decimals | |
| Lesson Objectives: Divide decimals by whole numbers | | | | |
| Groupings (e.g., whole class, small groups, co-teaching): whole group/small group | | | | |
| Skills & Standards: Multiplication, division, estimation  6.NS.B.2 - Fluently divide multi-digit numbers using the standard algorithm  6.NS.B.3 - Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm | | | | |
| **Progression of Learning & Teaching** | | | | |
| Opener: | Present students with the following problem:  Four friends go to dinner together. When the check comes, they want to split the bill evenly. The total check is $102.44. What is a reasonable estimate for how much each person will pay? How do you know?  Give students some time to work on figuring out the problem presented. | | | **Points to Remember**   * Problems should include division that terminates and repeats. This should have been previously addressed in whole number by whole number division. * Students should know what to do with remainders in different situations. For example, rounding to the nearest hundredth for money. * Students should realize the importance of estimating their solution prior to solving the problem and using that estimate to determine the reasonableness of their solution. |
| Activities & Tasks: | Ask students to share their estimates and explain how they know it is reasonable. Ask students to share how they could use this information to find the exact/actual quotient.  Then model how to do the problem procedurally on the board.  Give a similar problem, model how to solve procedurally after you have students estimate their answers first.  Have each group create their own questions, estimate and solve procedurally. Then complete work is switched between groups and the groups do an error analysis to check for correction. | | | Resources:  White boards, markers, worksheet, exit ticket  Video: [Estimating decimal division](https://www.khanacademy.org/math/cc-fifth-grade-math/divide-decimals/estimate-to-divide-decimals/v/approximating-dividing-by-decimals)  Video: [How to Divide a Decimal by a Whole Number](https://www.youtube.com/watch?v=IheBIlt2s20)  Symbolism/Notation:  ÷, , , . ,    Key Vocabulary:   * Division - a method of distributing a group of things into equal parts. * Multiplication - a method of finding the product of two or more numbers. * Dividend - the number that is being divided. * Divisor - the number that it is being divided by. * Quotient - a result obtained by dividing one quantity by another. * Numerator - the part of a fraction that is above the line and signifies the number to be divided by the denominator. * Denominator - the part of a fraction that is below the line and that functions as the divisor of the numerator. * Decimal - one of the types of numbers, which has a whole number and the fractional part separated by a decimal point. * Decimal point - a point or dot we use to separate the whole number part from the fractional part of a decimal number.   Scaffolding/Differentiation:  Scaffolding will be provided as I first model, then support. Teacher will encourage discourse in small groups to help students make sense of the problems they are solving. Teacher will ask assessing and advancing questions of students to determine scaffolds, clarifications, and differentiations that may be required in real time. |
| Level of Cognitive Complexity: | Creating  Evaluating  Analyzing | Applying  Understanding  Remembering | |
| Key questions: | What does it mean to split something? What does it mean to divide? How is division related to multiplication?  How is decimal division similar to whole number division? | | |
| Closure: | Students complete an exit ticket of a similar problem to the opener. | | |
| Next Steps: | Provide students more opportunities to practice solving long division problems with decimals. Be sure students are proficient with algorithm in order to assist in understanding division of decimals by decimals in upcoming lessons. Retain estimation practice during these tasks to build number sense and fluency. | | | **Formative Assessment/ Criteria for Success:**  Informal (teacher will ask assessing and advancing questions while monitoring work)/exit ticket |