Auburn K. Walton

6th Grade Mathematics

Lesson 1: Decimals and Fractions 50 Minutes

Common Core Standards:

6.RP.3c Fin a percent of a quantity as a rate per 100 (e.g. , 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.

Objectives: Students will write decimals as fractions or mixed numbers and vice versa.

**Introduction**

* When students come in they will complete a warm up activity that relates to the previous material.

**Development:**

Write the decimal 0.2 on the board.

**Ask**:

* *How many digits to the right of the decimal point does this decimal have?* One
* What place value does that digit have? Tenths
* How would you represent tenths as a fraction? Write a fraction with a 10 in the denominator.

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* Answers should usually be written in simplest form. To simplify a fraction, divide the numerator and the denominator by the GCF.
* To convert fractions with denominators that are factors of 10, 100, or 1,000 to decimals, multiply the numerator and denominator by the missing factor to find an equivalent fraction with a denominator of 10, 100, or 1,000.

Step-by-Step Examples:

1. What’s the Math? Decimals as fractions
   * Say 0.6 in words. Six tenths
   * What fraction is represented by words? 6/10
   * Is this in simplest form? No
   * What is the GCF of 45 and 100? 2
2. What’s the Math? Decimals as fractions
   * Say 0.45 in words. Forty-five hundredths
   * What fraction is represented by the words? 45/100
   * What is the GCF of 375 and 1,000? 5
3. What’s the Math? Decimals as fractions
   * Say 0.375 in words. Three hundred seventy-five thousandths
   * What fraction is represented by the words? 375/1,000
   * What is the GCF of 375 and 1,000? 125
4. What’s the Math? Decimals as mixed fractions
   * Say 9.85 in words. Nine and eighty-five hundredths
   * What fraction is represented by the words? 9 85/100
   * Is this in simplest form? No
   * What is the GCF of 85 and 100? 5
5. What’s the Math? Decimals as fractions
   * Is 12 a factor of 100? No what is 9/12 written in simplest form? ¾
   * What is ¾ rewritten as a fraction with a denominator of 100? 75/100
   * What is 75/100 in word form? Seventy-five hundredths
6. What’s the Math? Mixed numbers as decimals
   * What is 1 3/8 in word form? One and three-eights
   * Can you rewrite 3/8 as a fraction with a denominator of 10, 100, or 1,000? If so what is it? Yes; 3/8 is equivalent to 375/1,000
   * What is 375/1,000 written as a decimal? 0.375
   * What is 1 3/8 written as a decimal? 1.375

**Culminating**:

* Have students write down anything they had questions about/ trouble with about the lesson.
* Homework time.