5th Grade Assignment – Week #19

<u>Group Assignments</u>:

For Tuesday. **Discovery!**

1) With each of the below problems, combine the fractions into a single fraction. Normally, all final answers to fraction problems should be given in reduced form, but in this case, all fractions must have denominator that is a power of ten (10, 100, 100, etc.).

   a) $\frac{3}{10} + \frac{9}{100}$

   b) $\frac{6}{10} + \frac{5}{100}$

   c) $\frac{2}{10} + \frac{8}{100} + \frac{3}{1000}$

   d) $\frac{9}{10} + \frac{3}{100} + \frac{4}{1000} + \frac{1}{10000}$

2) What is the trick for doing the above problems?

3) How can you adjust this trick so that it can be used for the below problems?

   a) $\frac{4}{100} + \frac{3}{1000}$

   b) $\frac{9}{10} + \frac{4}{1000}$

   c) $\frac{5}{100} + \frac{8}{10000}$

4) Now go the other way around. With each fraction, rewrite it as the sum of several fractions, where each fraction has a one-digit numerator, and a denominator that is a power of ten.

   a) $\frac{29}{100}$

   b) $\frac{375}{1000}$

   c) $\frac{704}{1000}$

   d) $\frac{24739}{100000}$

5) *Puzzle!*

   a) Find two numbers that add to 59 and subtract to 11.

   b) Find two numbers that multiply to 210 and add to 37.

   c) Find two numbers that multiply to 210 and subtract to 37.

For Thursday

1) With each of the below problems, rewrite the given decimal fraction in two ways: as a single fraction (with a power of ten denominator), and then as a series of fractions where each one has a single-digit numerator and a power of ten denominator.

   Things to note:
   - Be sure to connect this exercise to what you learned from Tuesday's group assignment.
   - In this case, it is best not to reduce any of the fractions.

   a) 0.47

   b) 0.381

   c) 0.2743

   d) 0.253759

   e) 0.0047

   f) 0.0204

   g) 0.0200

2) Convert each common fraction into a decimal fraction, written in the standard, modern way.

   a) $\frac{13}{100}$

   b) $\frac{693}{1000}$

   c) $\frac{3}{10}$

   d) $\frac{3}{100}$

   e) $\frac{3}{1000}$

   f) $\frac{3}{1000000}$

   g) $\frac{613}{10000}$

   h) $\frac{39}{100000}$

   i) $\frac{1}{5}$

   j) $\frac{7}{20}$

   k) $\frac{17}{25}$

   l) $\frac{119}{400}$

3) *Puzzle!* Sam has 3 fewer pets than Nancy. Emily has as many pets as Sam and Nancy combined. If Nancy has twice as many pets as Sam, how many pets does Emily have?

<u>Individual Work</u>

- *Main Lesson Book Pages.* You should create one or two pages on decimal fractions. This should be enough for this whole week.

- *Decimal Fractions.* If you didn't complete any part of the assignment from group work (from either Tuesday or Thursday), then you should do so on your own (as much as you can).

- *Fraction Practice.*

  1) $\dfrac{7}{8} + \dfrac{1}{4}$

  2) $\dfrac{9}{13} - \dfrac{6}{13}$

  3) $\dfrac{2}{15} + \dfrac{5}{6}$

  4) $\dfrac{1}{6} \times \dfrac{1}{7}$

  5) $\dfrac{5}{8} \times \dfrac{3}{4}$

  6) $\dfrac{3}{4} \div \dfrac{3}{8}$

  7) $\dfrac{3}{10} \div \dfrac{7}{9}$

  8) *Challenge!* $\dfrac{17}{20} + \dfrac{19}{24}$

- 9) *Standard Long Division.*   Just one problem $\rightarrow$ $5901 \div 7$

- *Extra Challenge Problem.*

  10) Convert this common fraction into a decimal fraction: $\dfrac{97}{125}$

  11) Convert this Babylonian fraction into a common (modern) fraction: 0, 9, 22, 30