Friday, December 4th

Decimals: Expanded Form

hundreds | tens | ones . tenths | hundredths | thousandths | ten thousandths

ex 0.4567

4 → tenths
5 → hundredths
6 → thousandths
7 → ten thousandths

Review 14 : (1 × 10) + (4 × 1)

1 → tens
4 → ones

ex : 0.14 = (1 × 0.1) + (4 × 0.01)

1 → tenths
4 → hundredth

In expanded form:

① tenths = 0.1 = $\frac{1}{10}$

② hundredths = 0.01 = $\frac{1}{100}$

③ thousandths = 0.001 = $\frac{1}{1000}$

④ ten thousandths = 0.0001 = $\frac{1}{10000}$

ex 0.5683

= (5 × 0.1) + (6 × 0.01) + (8 × 0.001) + (3 × 0.0001)

ex 23.64

= (2 × 10) + (3 × 1) + (6 × $\frac{1}{10}$) + (4 × $\frac{1}{100}$

Decimals to Fractions

ex Convert 0.36 into a fraction

↓

hundreth

∴ the denom. = 100

$$\frac{36 \div 2}{100 \div 2} = \frac{18 \div 2}{50 \div 2} = \frac{9}{25}$$

$$2\overline{)36}\quad 18,\ -2\downarrow,\ 16,\ -16,\ 0$$

ex#2 4.537

↓

thousandths

denom = 1000

$$4\frac{537}{1000}$$

Step #1: We look at the last digit of our #. The place value of that digit, represents our denom.

Step #2: If there is a whole, that represents the whole of our mixed #

Step #3: The decimal portion of the #, represents the numerator

Step #4: Reduce if possible

Converting Fractions to Decimals

ex #1 Convert $\frac{3}{8}$ into a decimal

$$8\overline{)3.0} \quad 0.375$$

8 ← divisor; 3.0 ← dividend; 0.375 ← quotient

-24

6.0

-56

4.0

-40

0

ex #2 Convert $3\frac{4}{9}$ into a decimal

$\frac{3\times9+4}{9} = \frac{31}{9}$

$$9\overline{)31} \quad 3.44\ldots$$

-27

40

-36

40

-36

4

Step #1 - Mixed # into improper

Step #2 - Set up our division

Step #3 - When nothing can be divided, we add a decimal to our quotient, and a 0 to our dividend

Step #4 - Continue with the division, until completed

H/W p 93 A all
p 94 B all
A #1-10
p 95 A #1-10