

**MONDAY**  
September 28,  
2015

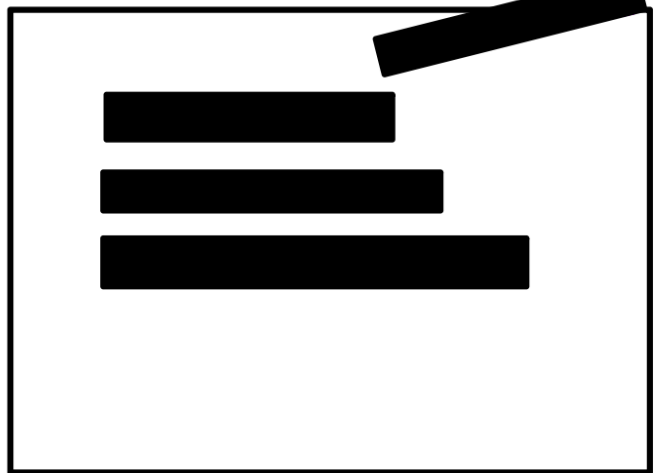
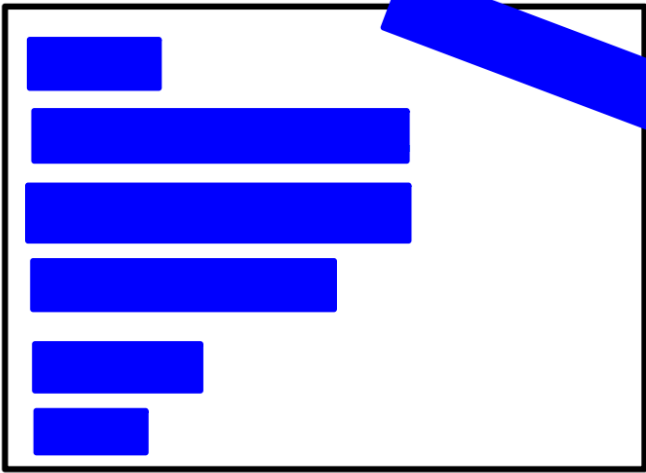
## **WARM-UP**

**Page 34**

***How would you group the words below?***

- **Addition**
- **Decreased by**
- **Increased by**
- **More than**
- **Product**
- **Twice as much as**
- **Total**
- **Difference**
- **Divided by**
- **Triple**
- **Less than**
- **Quotient**
- **Multiplication**
- **Of**
- **Multiply**
- **Division**
- **Times**
- **Take away**
- **Subtract/subtracted from**
- **Add**
- **Greater than**
- **Split Equally**
- **Sum**
- **Subtraction**
- **Each**

**Benchmark 1**  
**Friday, Oct.2**



Classify Numbers

**LESSON ESSENTIAL QUESTION:**

How do we identify rational numbers?

What are the types of numbers?

All numbers are Real Numbers. They include: natural, rational, irrational, and integers.

What do rational numbers include?

integers, whole numbers, fractions, repeating and terminating decimals, perfect squares

What do irrational #s include?

non-terminating decimals  
non-perfect squares

## Classify Numbers

## LESSON ESSENTIAL QUESTION:

How do we identify rational numbers?

## Can I match numbers?

### VALUE

- natural
- rational
- irrational
- integer
- whole number
- fraction
- mixed number
- repeating decimal
- terminating decimal
- perfect square
- non-terminating decimal
- non-perfect square

### Example

-5

3.333...

2

5

7.4833147...

square root of 64  $\sqrt{64}$

18

$1\frac{3}{4}$

square root of 35  $\sqrt{35}$

9.6

**HOMEWORK: Create a frayer diagram for the most difficult term.**

## SUMMARY

**Tuesday  
September 29, 2015**

## **WARM UP**

**Page 36**

Evaluate the following expressions

1)  $15.6 + 8.9$

2)  $9.7 + .78$

3)  $18.09 + (-3.77)$

4)  $-14.10 - 6.55$

**Benchmark 1  
Friday, Oct. 2**

## LESSON ESSENTIAL QUESTION:

How do we add rational numbers effectively?

Adding Decimals and Fractions

What steps do we use to add decimals?

Three basic steps for adding decimals: Ex 1) 12.5    Ex 2) 9.36  
1. Line up decimal places  
2. Add (starting from the right)  
3. Bring down decimal point.

$$\begin{array}{r} 12.5 \\ + 3.88 \\ \hline \end{array}$$
$$\begin{array}{r} 9.36 \\ + 15.64 \\ \hline \end{array}$$

What is LCM?

Least Common Multiple-the smallest number, other than zero, that is a multiple of two or more numbers.

Example: LCM(12, 20)=

12: 12, 24, 36, 48, 60, 72

20: 20, 40, 60, 80

Example: LCM (3,4)

$$\frac{3}{4} + \frac{2}{3} =$$

4 steps to adding fractions

1. Find the LCM of the denominators.
2. Rewrite fractions using common denominators.
3. Add NUMERATORS.
4. ALWAYS REDUCE (if possible)



Find each sum. Don't forget the rules to determine the calculation and sign of your answer.

1)  $5.4 + (-9.7)$

2)  $10.8 + (-4.73)$

3)  $(-0.5) + 0.3$

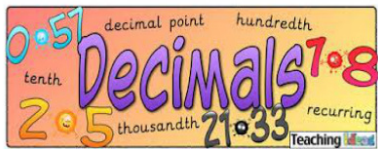
4)  $(-4.79) + (-0.4)$

5)  $3.305 + 1.7$

6)  $(-3.6) + 0.43$

7)  $(-4.3) + 14.5$

8)  $(-7.1) + 3.63$



**FRACTIONS:**  
Adding Fractions

**LESSON ESSENTIAL QUESTION:**  
How do we add fractions effectively?

**EXAMPLE 1**

$$\frac{2}{5} + \frac{2}{3} = \square = \square$$

Error



**EXAMPLE 2**

$$2\frac{2}{3} + 1\frac{3}{5} = \square = \square$$

Error



**EXAMPLE 3**

$$7\frac{8}{9} + \frac{2}{3} = \square = \square$$

What could  
the Error  
be?





**WORD PROBLEMS:**  
Adding Rational #s

**LESSON ESSENTIAL QUESTION:**

How do we solve word problems with rational numbers effectively?

**EXAMPLE 1**

One cookie recipe calls for  $\frac{2}{3}$  cup of sugar. Another recipe calls for  $1\frac{1}{4}$  cups of sugar. How many cups of sugar are needed for both recipes?

**EXAMPLE 2**

Dean ran  $4\frac{1}{2}$  miles on Saturday and  $5\frac{1}{12}$  miles on Sunday. How many miles did Dean run in all on Saturday and Sunday?

**COMMERCIAL**

TOPIC:



**CONVERTING BETWEEN  
FRACTIONS & DECIMALS**

**BREAK**

When changing a fraction into a decimal remember:

1. Divide the numerator (dividend) by the denominator (divisor).
2. Add a decimal and bring it straight up into the dividend.
3. Complete long division steps  
-divide, multiply, subtract, bring down
4. Keep adding a zero until you notice the type of decimal the quotient will be.

When changing a decimal into a fraction remember:

1. Write the digits behind the decimal as the numerator.
2. Write the place value of the last digit as the denominator.
3. Simplify if you can.

**Wednesday  
September 30,  
2015**

**Give a man a fish and you feed him for a day.  
Teach a man to fish and you feed him for a lifetime.**

*-Chinese Proverb*

## **WARM UP**

**1) Jose' bought 1.49 pounds of turkey. One pound of turkey costs \$6.99. Before tax, how much did Jose' pay?**

**2)  $-8.4 + 7.5 =$**

**3)  $-9 \times -4 =$**

**4)  $12 \div -3 =$**

**Benchmark 1  
Friday, Oct.2**

Subtracting  
Decimals and  
Fractions

**LESSON ESSENTIAL QUESTION:**

How do we subtract decimals and fractions effectively?

What steps do we use to subtract decimals?

Three basic steps for subtracting decimals:

1. Line up decimal places
2. Subtract (starting from the right)
3. Bring down decimal point.

Ex 1)

$$12.5 - 3.88 = \text{[redacted]}$$

Ex 2)

$$-12.5 - 3.88 = \text{[redacted]}$$

What do we do?

Use the Least Common Multiple.

Example: LCM(15, 20)=

15: 15, 30, 45, 60, 75...

20: 20, 40, 60, 80...

3 steps to subtracting fractions

1. Find the LCM of the denominators.
2. Rewrite fractions using common denominators.
3. Subtract NUMERATORS.
4. ALWAYS REDUCE (if possible)

Example: LCM (4,6)

$$\frac{3}{4} - \frac{2}{6} = \text{[redacted]}$$



Subtracting  
Fractions

**LESSON ESSENTIAL QUESTION:**

How do we subtract fractions effectively?

**EXAMPLE 1**

$$\frac{3}{7} - \frac{1}{8} = \blacksquare$$

Error



**EXAMPLE 2**

$$8 - \frac{2}{3} = \blacksquare$$

Error



**EXAMPLE 3**

$$1\frac{1}{5} - \frac{6}{15} = \blacksquare = \blacksquare$$

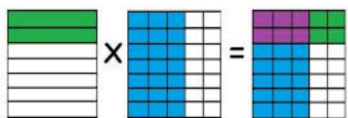
What could  
the Error  
be?



**Thursday  
October 1, 2015**

**Benchmark 1 &  
ReTest Unit 1  
DUE tomorrow!**

Multiplying Fractions



$$\frac{2}{7} \times \frac{3}{5} = \frac{6}{35}$$

## **WARM UP-**

$$1) \frac{12}{14} \bullet \frac{1}{6} =$$

$$2) \frac{12}{14} \div \frac{1}{6} =$$

$$3) \frac{-2}{10} \div \frac{-2}{5} =$$

$$4) 2\frac{1}{4} \div \frac{5}{8} =$$

**5. Ms. Moore purchased  $1\frac{7}{8}$  lbs of fruit. If Ms. Moore eats  $\frac{3}{8}$  lbs each day, how many days will the fruit last?**

## LESSON ESSENTIAL QUESTION:

How do we multiply and divide decimals effectively?

### DECIMALS:

#### Multiplication/Division

What are two ways of multiplying numbers?

#### Multi-digit Multiplication:

1. Traditional Method (Old School)
2. Place value products (New School)

#### Traditional Method

1. Multiply the numbers w/o the decimal.
2. Add the number of decimal places in both numbers.
3. Move decimal places to the left in your answer.

Example

$$\begin{array}{r} 16.5 \\ \times .25 \\ \hline \end{array}$$

1 decimal place  
+2 decimal places  
3 decimal places

So,  $16.5 \times .25 = 4.125$

#### Place Value Products

1. Multiply each place value and place them in a column.
2. Add all of the products for the answer.
3. Move decimal places to the left in your answer.

Example

$$\begin{array}{r} 16.5 \\ \times .25 \\ \hline \end{array}$$

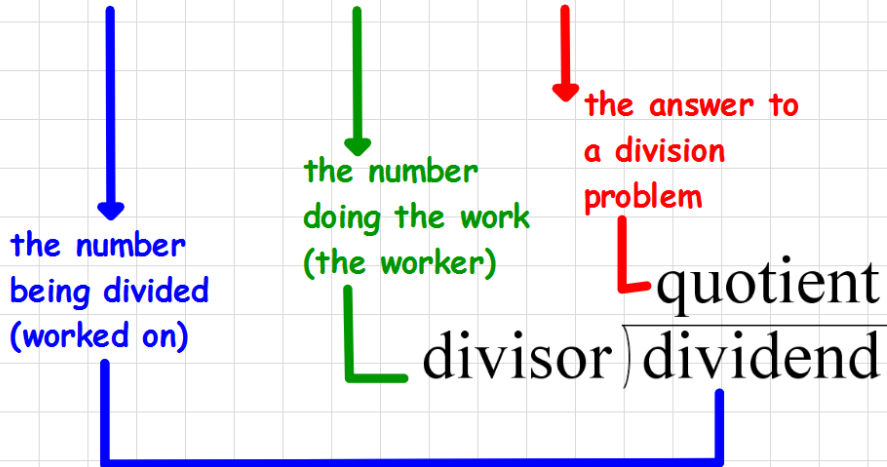
**DECIMALS:**  
Multiplication/Division

**LESSON ESSENTIAL QUESTION:**

How do we multiply and divide decimals effectively?

**3 Parts of a Division problem**

**DIVIDEND** ÷ **DIVISOR** = **QUOTIENT**



**How do we divide w/ decimals?**

Steps

1. Make the divisor a whole number
2. Move decimal point over in the dividend
3. Divide until quotient repeats or comes out evenly.

$$\begin{array}{r} 49 \\ 4 \overline{)196} \\ \underline{-16} \\ 36 \end{array}$$

$$\begin{array}{r} 4900 \\ .04 \overline{)196.00} \\ \underline{16} \\ 36 \end{array}$$



Solve the following problems.

Ex 1)  $12.4 \times 3.5 =$

Ex 2)  $2.75 \times .85 =$

Ex 3)  $18.17 \div 7.9 =$

**FRACTIONS:**  
Multiplying/Dividing

**LESSON ESSENTIAL QUESTION:**

How do we multiply and divide fractions effectively?

What is GCF?

Greatest Common Factor-the largest number that two or more numbers share as factors.

Example: GCF(12, 20)=



3 steps to multiplying fractions

1. Multiply the numerators  
(numbers above the fraction bar)
2. Multiply the denominators  
(numbers below the fraction bar)
3. Reduce (or simply) by dividing the numerator and denominator by their GCF.

Example:

$$\frac{3}{4} \bullet \frac{2}{3} = \frac{\text{red box}}{\text{blue box}} = \text{green box} = \frac{1}{2}$$

3 steps to dividing fractions

1. KEEP the first fraction
2. CHANGE  $\div$  to  $\bullet$
3. FLIP the second fraction (reciprocal).

Example:

$$\frac{3}{4} \div \frac{2}{3} = \frac{3}{4} \bullet \frac{3}{2}$$
$$\text{green box} = 1\frac{1}{8}$$

**FRACTIONS:**  
Multiplying/Dividing

**LESSON ESSENTIAL QUESTION:**

How do we multiply and divide fractions effectively?

**EXAMPLE 1**

$$\frac{4}{7} \bullet \frac{7}{12} =$$

$$\frac{4}{7} \div \frac{7}{12} =$$

**EXAMPLE 2**

$$\frac{2}{5} \bullet \frac{10}{12} =$$

$$\frac{2}{5} \div \frac{10}{12} =$$

**EXAMPLE 3**

$$\frac{8}{9} \bullet \frac{2}{3} =$$

$$\frac{2}{3} \div \frac{8}{9} =$$



COMMERCIAL

TOPIC:   
USING EXPONENTS

BREAK

When operating with exponents, remember:

- The exponent tells us how many times to multiply the base.

$$\begin{aligned} 2^1 &= 2 \\ 2^2 &= 2 \cdot 2 = 4 \\ 2^3 &= 2 \cdot 2 \cdot 2 = 8 \end{aligned}$$

- Fractions raised to an exponent, move the exponent into the numerator and denominator.

$$\left(\frac{2}{3}\right)^3 = \frac{2^3}{3^3}$$

$$\frac{2 \cdot 2 \cdot 2}{3 \cdot 3 \cdot 3} = \frac{8}{27}$$

$$6^2 =$$

$$11^2 =$$

$$3^4 =$$

$$4^3 =$$

$$\left(\frac{1}{7}\right)^3 =$$

Explain why  $4^2$  has the same result as  $2^4$