October 10, 2011

Warm-Up:

Put each set of numbers in order from least to greatest.

Get out your homework:

YELLOW Review Worksheet
#1-60 all

60

	From	To
10	57	60
9	51	56
8	45	50
7	39	44
6	33	38
5	27	32
4	21	26
3	15	20
2	9	14
1	3	8
0	0	2

10/10 - Rational Numbers

Review of last chapter:

With your partner, come up with a definition for **integer**?

positive/negative whole number

A **rational number** is a number that can be written as the ratio of two integers.

fraction

$2 = \frac{2}{1}$ $\quad -3 = \frac{-3}{1}$ $\quad -\frac{1}{2} = \frac{-1}{2}$ $\quad 0.25 = \frac{1}{4}$

$\frac{1}{-2}$

Work with your partner and order these numbers from least to greatest:

$$-0.5,\ 1.25,\ -\frac{1}{3},\ 0.5,\ -\frac{5}{3}$$

$-\frac{5}{3}, -\frac{1}{3}, -0.5, 0.5, 1.25$

What difficulties did you have?

Fractions + decimals together

What did you have to recall how to do from last year?

converting decimals → fractions

fractions → decimals

What would have made it easier?

all positives, all decimals

all negatives.

Remember:

Decimals → Fractions

$.25 = \frac{1}{4}$

$\frac{25}{100}$ then simplify

Fractions → Decimals

$\frac{3}{4} = .75$

bottom) top

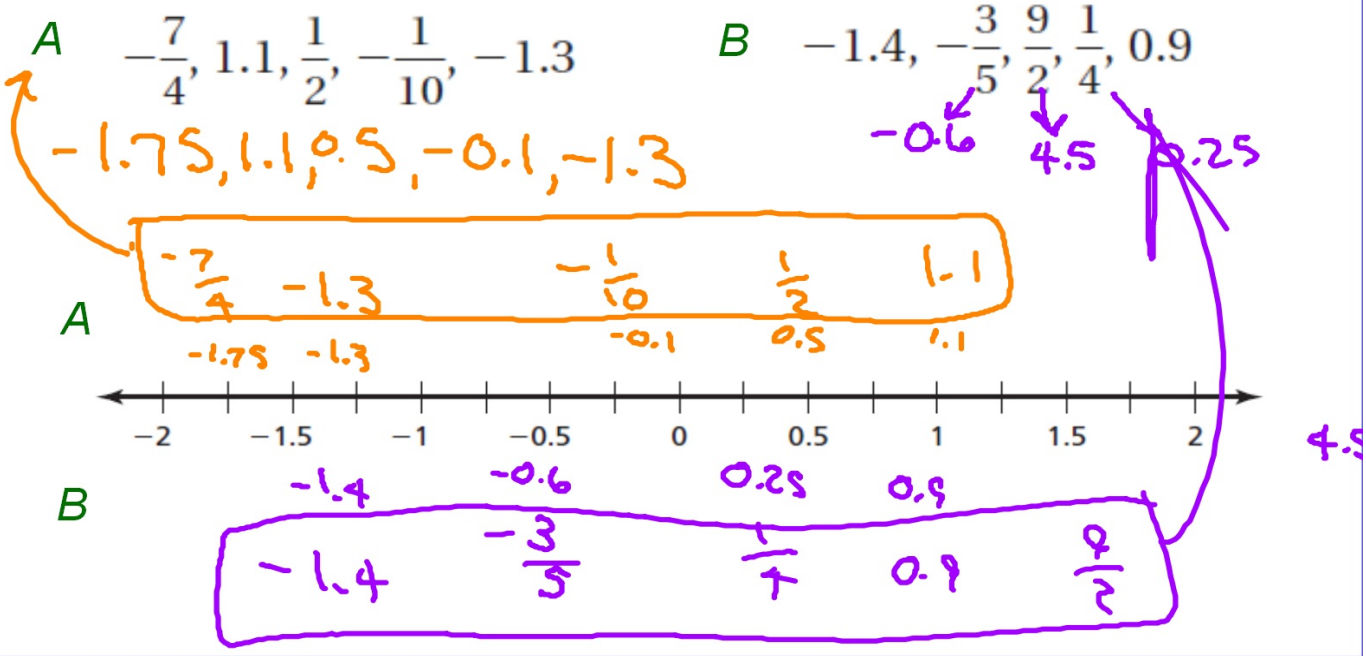
$$
\begin{array}{r}
.75 \\
4\overline{)3.00} \\
28 \\
\hline
20 \\
20 \\
\hline
0
\end{array}
$$

Now try it again:

Work with your partner and order these numbers from least to greatest:

A $-\frac{7}{4}, 1.1, \frac{1}{2}, -\frac{1}{10}, -1.3$

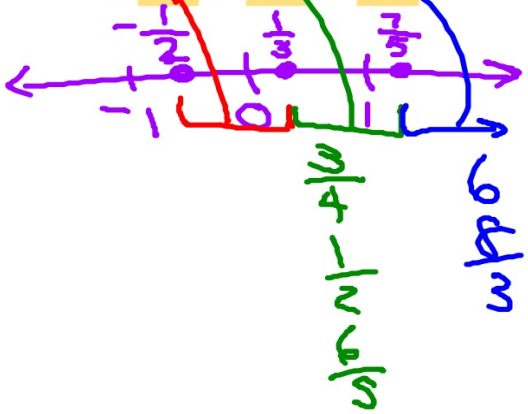
B $-1.4, -\frac{3}{5}, \frac{9}{2}, \frac{1}{4}, 0.9$



The numbers are in order from least to greatest. Fill in the blank spaces with rational numbers.

Work with your partner and be ready to explain HOW you figured it out.

$-\frac{1}{2}, \boxed{0}, \frac{1}{3}, \boxed{1}, \frac{7}{5}, \boxed{2}$



$-\frac{1}{3}, \boxed{}, -0.1, \boxed{}, \frac{4}{5}, \boxed{}$

Homework:

Worksheet 2.1 Enrichment and Extension #1-13 all and 6 problems on the back

2.1 Enrichment and Extension

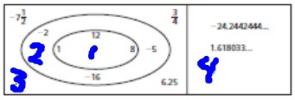
Where do I Belong?

An **irrational number** is a decimal that goes on forever and does not repeat. Irrational numbers cannot be written as fractions.

Examples: 3.14159..., −0.010110111..., 2.2360679...

A **real number** is any number that is either rational or irrational.

The Venn diagram shows how real numbers, rational numbers, irrational numbers, integers, and whole numbers are related.



1. Describe any patterns you notice with the numbers.
2. Place the name of each number type in its appropriate spot.

   Real number Rational number Irrational number Integer Whole number

For each real number, tell whether it is *rational*, *irrational*, an *integer*, and/or a *whole number*. You may have more than one answer.

3. $4\frac{2}{3}$ 4. $-32\overline{3}$ 5. 0.919911... 6. 15

7. Can you write 2 as a fraction? Are all whole numbers also rational numbers?
8. Can you write −14 as a fraction? Are all integers also rational numbers?

Complete the statement with *always*, *sometimes*, or *never*.

9. A **real number** chosen at random is _?_ an **integer**.
10. An **integer** chosen at random is _?_ a **real number**.
11. An **irrational number** chosen at random is _?_ a **rational number**.
12. A **rational number** chosen at random is _?_ an **integer**.
13. A **whole number** chosen at random is _?_ a **rational number**.

Due tomorrow

Order the numbers from least to greatest.

1. $-\frac{2}{3}, 0.6, \frac{3}{4}, -\frac{7}{4}, -0.3$
2. $1.5, -1.3, \frac{7}{5}, -\frac{6}{5}, 1.65$
3. $-2.75, \frac{11}{4}, \frac{5}{4}, -0.37, 2.65$
4. $\frac{4}{10}, -0.8, \frac{1}{8}, 4.5, -\frac{4}{2}$
5. $3.8, -\frac{9}{3}, -0.3, \frac{6}{4}, \frac{8}{5}$
6. $-1.5, \frac{7}{3}, -\frac{3}{4}, 0.6, \frac{9}{6}$