Name:_____ Date:_____

Notes
Algebra Section 2.1
Pages 64-70

Goal: "Graph and compare positive and negative numbers"
"Classify numbers as whole, integer, and rational"
"Understand and apply absolute value and opposites"

Vocabulary:

Whole Numbers: _____

Integers: _____

Rational Numbers: _____

Classifying:
Classify the following numbers using all names that apply.

a) 5 b) 0.6 c) −7 d) $-2\frac{2}{3}$ e) −24

Comparing:
Compare using: >, <, ≥, ≤, or = (fill in the missing space)

On a number line where are larger numbers located? _____

On a number line where are smaller numbers located? _____

Ex: −17 ____ 14

Ex: −22 _____ −15

Ex: 5.2 _____ 5.2003

Ex: 0.31 _____ 0.301

Helpful Hints when Comparing:

*_____numbers are always _____

*When comparing two negative numbers the one with the smaller _____ _____ is actually bigger.

* When comparing decimals (positive or negative), use the same number of _____ _____ (You can add _____ as placeholders if necessary.

*To compare fractions, you need a _____ _____.

* To compare fractions to decimals and vice versa, make both _____ or both _____.

Ordering
Order the following from least to greatest, then classify each number using all of the names that apply.

Ex: –0.03, 0.21, 0.09, –0.22

Ex: 3, –1.2, –2, 0

Ex: $4.5, -\frac{3}{4}, -2.1, 0.5$

Ex: $\frac{1}{6}, 1.75, -\frac{2}{3}, 0$

Ex: 3.6, –1.5, –0.31, –2.8

Ex: The apparent magnitude of a star is its brightness as observed from Earth. The greater the magnitude, the dimmer the star. Order the stars from brightest to dimmest.

Star	Arcturus	Sirius	Vega
Magnitude	–0.6	–1.47	0.03

Vocabulary:

Opposites: _____

Absolute Value: _____

Example:
The opposite of 8 is -8. The absolute value of 8 is 8.
The opposite of -9 is 9. The absolute value of -9 is 9.

Try These:

	-a (opposite of)	$\lvert a \rvert$ (absolute value)
$a = -2.5$		
$x = \frac{3}{4}$		
$y = \frac{3}{8}$		
$b = -0.6$		