**2.1: Use Integers and Rational Numbers**

**Goals:**  \*Compare and order rational numbers

 \*Classify numbers as whole, integer and rational

 \*Understand and apply absolute value and opposites

**Whole Numbers:**

**Integers:**

**Rational Numbers:**

**Classify the following numbers using all names that apply:**

a) 5 b) 0.6 c) –7 d) e) –24

\*On a number line, where are larger numbers located?

Where are smaller numbers located?

So the biggest number is always…

**Compare using: >, <, >, <, or = (fill in the missing space)**

**Ex:** –17 \_\_\_\_ 14 **Ex:** –22 \_\_\_\_ –15

**Ex:** 5.2 \_\_\_\_\_ 5.2003 **Ex:** 0.31 \_\_\_\_ 0.301

**Some Helpful Hints to Comparing Numbers:**

1. When comparing two negative numbers:
2. When comparing decimals, positive or negative:
3. To compare fractions:
4. To compare fractions to decimals and vice versa:

**Change the following decimals to fractions:**

a) 0.77 b) 0.64 c) 0.375

**Simplify the following fractions: (do NOT use long division)**

a)  b)  c) 

**Order the following numbers from least to greatest, then classify each number using all names that apply:**

**Ex:** –0.03, 0.21, 0.09, –0.22 **Ex:** 3, –1.2, –2, 0

**Ex:** 4.5, , –2.1, 0.5 **Ex:** , 1.75, , 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 |

**Opposites:**

**Absolute Value:**

**For the following numbers, find the opposite of each number and the absolute value of each number.**

 **–*a*** $\left|a\right|$

**Ex:**  *a* = –2.5

**Ex:** *x* = 

**Ex:** *y* = 

**Ex:** *b* = –0.6