

Math 9 Section 1.1 – The Real Number System

Homework: Section 1.1 on Pg. 6; 1-3all – Answers on Pg. 361

<p>Natural Numbers:</p> <p>Counting numbers</p> <p>Examples:</p> <p>1, 2, 3, 4, ...</p>	<p>Whole Numbers:</p> <p>Counting numbers and zero</p> <p>Examples:</p> <p>0, 1, 2, 3, 4, ...</p>	<p>Integers:</p> <p>Positive and negative whole numbers</p> <p>Examples:</p> <p>..., -2, -1, 0, 1, 2, 3, ...</p>
<p>Rational Numbers:</p> <p>Numbers that can be written as <u>fractions (ratios)</u> (or) any repeating/terminating decimal</p> <p>Repeating: $7.\overline{324324324} = 7.\overline{324}$</p> <p>Terminating: -5.427 (Steps!)</p> <p>Examples:</p> <p>$\frac{2}{3}$, $-\frac{18}{7}$, $-5.\overline{23}$, $73\% = 0.73$</p> <p>$5 = \frac{5}{1}$, $-3 = \frac{-3}{1}$, $0 = \frac{0}{1}$</p> <p>$\sqrt{4} = 2$, $\sqrt{0} = 0$</p>	<p>Irrational Numbers:</p> <p>NOT Can't write as fraction (or) Can't write as repeating/terminating decimal</p> <p>Examples:</p> <p>$\sqrt{43} = 6.5574\dots$</p> <p>$-0.5347291\dots$</p> <p>$\pi = 3.14159265\dots$</p>	
<p>Real Numbers:</p> <p>Natural, whole, integer, rational and irrational numbers</p>	<p>NOT Real Numbers:</p> <p>$\sqrt{-2}$</p>	

NOTE: There are an infinite number of...

† Natural numbers * Whole numbers † integers

† Rational numbers * irrational numbers real numbers

vsaue
in finity

non-real

Real Numbers

Rational Numbers

$$-2 = \frac{-2}{1} \quad \frac{0}{1} \quad 72\% \quad 0,54$$
$$\frac{3}{8} \quad \sqrt{4} = 2$$

Integers

... -2, -1, 0, 1, 2, 3 ...

whole numbers

0, 1, 2, 3, ...

Natural Numbers

1, 2, 3, ...

Irrational numbers

π

-0.3245723...

$\sqrt{5}$

$-\sqrt{37}$

Not Real \sqrt{s}