

Date:

Title:

(A) Lesson Objectives:

- a. Introduce students to the various number sets and their symbols
- b. Identify/classify numbers according to the number sets

(B) Opening Exercise

Solve these equations given the “conditions” for the equation

$x+5=8$ if $x \in N$	$x+5=8$ if $x \in Z$	$2x-2=5$ if $x \in N$	$x^2-2=2$ if $x \in Z$	$x^2-2=3$ if $x \in \overline{Q}$
$x+5=2$ if $x \in N$	$x+5=8$ if $x \in Z^+$	$2x-2=5$ if $x \in Q$	$x^2-2=3$ if $x \in Z$	$x^2-2=3$ if $x \in R$

(C) Contextual Introduction

QUESTION: → Do people “discover” numbers or “invent” numbers???

(D) Notations/Diagrams

(E) Investigations: Number Patterns

- a. **QUESTION:** Are decimals numbers examples of rational numbers?
- b. Given the following numbers, show whether they are or are not rational numbers

0.2	0.55	0.125
$0.\overline{3}$	$0.\overline{2}$	$0.\overline{75}$
$0.\overline{86}$	$0.\overline{372}$	$0.\overline{36}$
3.141592653589793238462643383279502884197169399375105820974944592307816406286....		

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(F) Practice

- a. <http://teacherweb.com/NY/Arlington/AlgebraProject/1L1TheRealNumberSystem.pdf>
- b. <http://www.kutasoftware.com/FreeWorksheets/Alg1Worksheets/Number%20Sets.pdf>

(G) Homework/Resources

- HW: from Textbook → **Sec 1B**, p20, Q1,2,4,

- Video help from High School Learning:
 - o <http://www.youtube.com/watch?v=qAXyqBbFuAs>
- Video help from MuchoMath
 - o http://www.youtube.com/watch?v=IK0OR2vg_Qc&feature=related
- Reading from PurpleMath
 - o <http://www.purplemath.com/modules/numtypes.htm>
- Reading from West Texas A&M
 - o http://www.wtamu.edu/academic/anns/mps/math/mathlab/beg_algebra/beg_alg_tut2_sets.htm