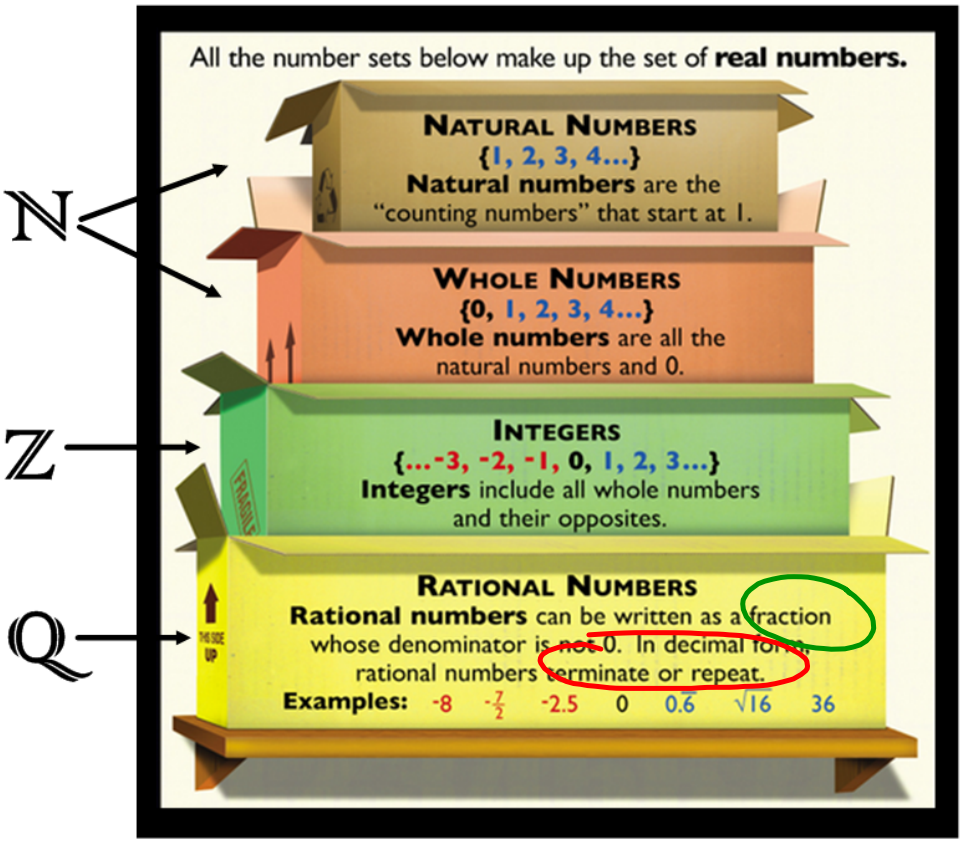
Special Number Sets

- Students will be able to determine what number sets an integer belongs to

HW: Lesson 6A worksheet



*Putting a plus sign in front of the set symbol indicates only positive numbers from that set, i.e. + $\mathbb{N}$

Rewriting decimals and repeating decimals in fraction form

* *

1.37

$1\frac{37}{100}$

$\frac{137}{100}$

(mult by 100) (sub x from both sides)

0.414141...

$x = .414141\ldots$

$100x = 41.414141\ldots$

$100x - x = 41.414141\ldots - x$

$100x - x = 41.414141\ldots - .414141$

$99x = 41$

$x = \frac{41}{99}$

1. Explain why -5, 3, and 0.72 are all rational numbers.

$-\frac{5}{1}$ $\frac{3}{1}$ $\frac{72}{100}$

All can be written as fraction.

2. Indicate which number sets each belongs to

rational integers Natural

	$\mathbb{Q}$	$\mathbb{Q}^+$	$\mathbb{Z}$	$\mathbb{Z}^+$	$\mathbb{N}$
3	X	X	X	X	X
-2	X		X		
1.5	X	X			
0	X	X	X	X	
$-\frac{1}{2}$	X				
$\sqrt{5}$					
$1.\overline{32}$	X	X			

3. Explain why 9/2 does not belong to the set of integers.

4.5 is not a pos/neg whole #.

4. Explain why 4/0 is not a rational number.

diviing by zero is undefined.

5. Show how the following are rational numbers by rewriting them.

a. 0.35 $\frac{35}{100}$

b. 1.27 $1\frac{27}{100}$ or $\frac{127}{100}$

c. 0.141414... $= \frac{14}{99}$

$x = .14141414...$

$180x = 14.1414...$

$100x - x = 14.1414 - .1414$

$99x = 14$

$x = \frac{14}{99}$

.327327...

$\frac{327}{999}$