

**REAL NUMBER SYSTEM**  
**Classification of Numbers**

1. For every given number, clearly state all the sets the number belongs to. If the given number is not real, write: "Not  $\mathbb{R}$ ", using the notation introduced in class.

	Number	All sets a given number belongs to
1	$\sqrt{8}$	
2	$\pi$	
3	$0$	
4	$-4.5$	
5	$\frac{5}{1.2}$	
6	$5.1$	
7	$\sqrt{-12}$	
8	$1.\overline{47}$	
9	$-0.9$	
10	$\frac{\sqrt{6}}{5}$	
11	$1.85$	
12	$10^9$	
13	$10^{-5}$	
14	$x$	

	Number	All sets a given number belongs to
15	<b>149</b>	
16	<b>-0.03</b>	
17	<b><math>\sqrt{16}</math></b>	
18	<b>-2</b>	
19	<b><math>\frac{20}{5}</math></b>	
20	<b><math>-\sqrt{121}</math></b>	

2. Give two examples of a number that is real but not rational: \_\_\_\_\_ and \_\_\_\_\_ .

3. Describe integers in words without giving examples.

4. Define a rational number.