Math-13 Sections 01 and 02

Homework #1

Due: Midnight 9/1

1. Indicate which subsets of the real numbers that the following values are members of:

VALUE	$\mathbb{N}$	$\mathbb{Z}$	$\mathbb{Q}$	$\mathbb{R} - \mathbb{Q}$	$\mathbb{R}$
0					
$\sqrt{2}$					
$\sqrt{9}$					
123.4					
-123					
π					
$12.34\overline{56}$					

2. Convert the rational value $12.34\overline{56}$ to integer ratio form using the algorithm that we learned in class.

3. Convert $24.57\overline{9}$ to integer ratio form *without* using the algorithm and justify your answer. (Hint: look for an alternate syntax for the value.)

4. Is $\dfrac{123.4}{56.99}$ a rational number? If so, then explain why *without* using the algorithm.