Math 0097
Spring 2015
Quiz #1

Name: Key Date: January 16, 2015

1. Use the chart below to place a check mark indicating which sets the item on the left is a member of.

	$\mathbb{N}$	$\mathbb{W}$	$\mathbb{Z}$	$\mathbb{Q}$	$\mathbb{Q}'$	$\mathbb{R}$
16	✓	✓	✓	✓		✓
$\sqrt{5}$					✓	✓
$\frac{2}{7}$				✓		✓
-9			✓	✓		✓
0		✓	✓	✓		✓

2. Write the "unique" Prime Factorization of 76 and 100.

$76 = 2 \cdot 2 \cdot 19$

$76 = 2 \cdot 38$

$38 = 2 \cdot 19$

$100 = 2 \cdot 2 \cdot 5 \cdot 5$

$100 = 2 \cdot 50$

$50 = 2 \cdot 25$

$25 = 5 \cdot 5$

3. Convert 760 to a fraction. ***ALWAYS REDUECE!***

$$0.760 = \frac{760}{1000} = \frac{380}{500} = \frac{190}{250} = \frac{95}{125}$$

$$= \frac{19}{25}$$

4. Convert the Non-Terminating decimal, $0.\overline{44}$ in to a fraction.

① Let $x = 0.\overline{44}$

② $100x = 44.\overline{44}$

③ $100x = 44.\overline{44}$

$\quad x = 0.\overline{44}$

$99x = 44$

$x = \frac{44}{99} = \frac{4}{9}$

5. Some real numbers are irrational. True or False? Write a sentence explaining your answer.

True. Because irrational numbers are a subset of the set of Real numbers.