# Math-19 Lab #1

1). Classify each of the listed numbers by putting an 'X' in the appropriate columns (Hint: some numbers will be in more than one set).

| | $\mathbb{N}$ | $\mathbb{W}$ | $\mathbb{Z}$ | $\mathbb{Q}$ | $\mathbb{R}-\mathbb{Q}$ | $\mathbb{R}$ |
|---|---|---|---|---|---|---|
| 0 | | | | | | |
| $\frac{4}{2}$ | | | | | | |
| -3 | | | | | | |
| 1.036 | | | | | | |
| $10.14\overline{23}$ | | | | | | |
| $\sqrt{2}$ | | | | | | |
| $-\pi$ | | | | | | |

2). Decimal to rational form conversion.

a). Convert $0.14\overline{23}$ to rational form.

b). Show that $0.\overline{1} = \frac{1}{9}$. If this is so, then $\frac{2}{9}$ should equal $0.\overline{2}$, $\frac{3}{9}$ should equal $0.\overline{3}$, and so on until $\frac{8}{9}$ should equal $0.\overline{8}$. So, what does $0.\overline{9}$ equal? Show that this is so by converting $0.\overline{9}$ to rational form.

c). What is an equivalent decimal value for $24.1\overline{9}$?

3). Section 1.1 Problems 41 and 43