

January 13, 2015

Sets

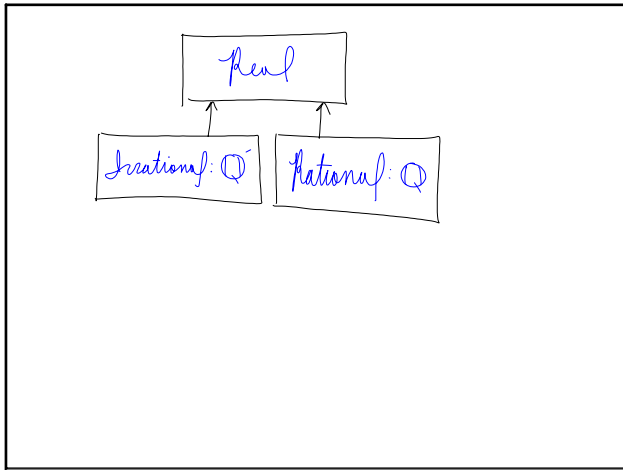
- ① $N = \{1, 2, 3, \dots\}$
- ② $W = \{0, 1, 2, \dots\}$
- ③ $Z = \{\dots, -1, 0, 1, \dots\}$
- ④ $Q = \left\{ \frac{m}{n} \mid m \text{ \& n is a integer \& } n \neq 0 \right\}$
- ⑤ $Q^- = \{ \text{all numbers not rational} \}$
- ⑥ $R = \{ \text{all numbers which are in } Q \text{ or } Q^- \}$

Jan 13-9:11 AM

Real

The "Real" number line

Jan 13-9:18 AM



Jan 13-9:30 AM

Q

$\frac{5}{8}$ of "some" whole

① Convert $\frac{5}{8}$ into a decimal

a) $8 \overline{) 5.0000}$ *Terminating Fraction or Decimal*

$\begin{array}{r} 0.625 \\ 8 \overline{) 5.0000} \\ \underline{-48} \\ 20 \\ \underline{-16} \\ 40 \\ \underline{-40} \\ 0 \end{array}$

* 0 Remainder

b) $\frac{2}{3} = 3 \overline{) 0.6666}$ ** Non-Terminating Fraction!*

$\begin{array}{r} 0.66 \\ 3 \overline{) 2.0000} \\ \underline{-18} \\ 20 \\ \underline{-18} \\ 20 \\ \underline{-18} \\ 20 \end{array}$

* 2 Remainder

* Settles in to a pattern

$\frac{2}{3} = 0.6\bar{6} \approx 0.67$

Jan 13-9:31 AM