

August 19, 2015

Set Notation

$$\mathbb{Z} = \{\dots, -2, -1, 0, 1, 2, \dots\}$$

Integers

$\mathbb{Q} = \left\{ \frac{a}{b} \mid a \neq b \in \mathbb{Z} \neq 0 \right\}$

Rational Numbers

Such that element of

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$\frac{3}{4}$  of  $\left[ \frac{1}{4} \mid \frac{1}{4} \mid \frac{1}{4} \mid \frac{1}{4} \right]$

whole = 1

$\frac{5}{0}$   $\left[ \quad ? \quad \right]$  = undefined

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Real

Rational Irrational

$\mathbb{Z}$  Non  $\mathbb{Z}$

$\mathbb{Q} \rightarrow$  ① Don't terminate  
② " Non-terminating

$\pi \approx 3.14159$

$e$   
 $\sqrt{2}, \sqrt{3}, \sqrt{5}$

$\frac{1}{2} = 2 \overline{0.5}$  terminating

$\frac{1}{3} = 3 \overline{0.333} = .3\overline{3}$  non terminating

$-\frac{6}{7}, \frac{23}{7}, \frac{3}{7}, \frac{9}{7}$   
 $\frac{3}{4}, 0.75, -1.5$

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Prep Handout

#1)  $\frac{4}{7} + \frac{5}{8}$  LCD =  $7 \cdot 8 = 56$

$$\frac{4(\cancel{8}) + 5(\cancel{7})}{56} = \frac{32 + 35}{56}$$

$$= \frac{67}{56}$$

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#26)

$$\frac{\frac{1}{1} + \frac{7}{7}}{\frac{2}{1} + \frac{4}{7}} = \frac{\frac{7+3}{7}}{\frac{14+4}{7}}$$

$$= \frac{\frac{10}{7} \text{ K}}{\frac{18}{7} \text{ F}}$$

$$\frac{10}{7} \cdot \frac{7}{18} = \frac{5}{9}$$

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