

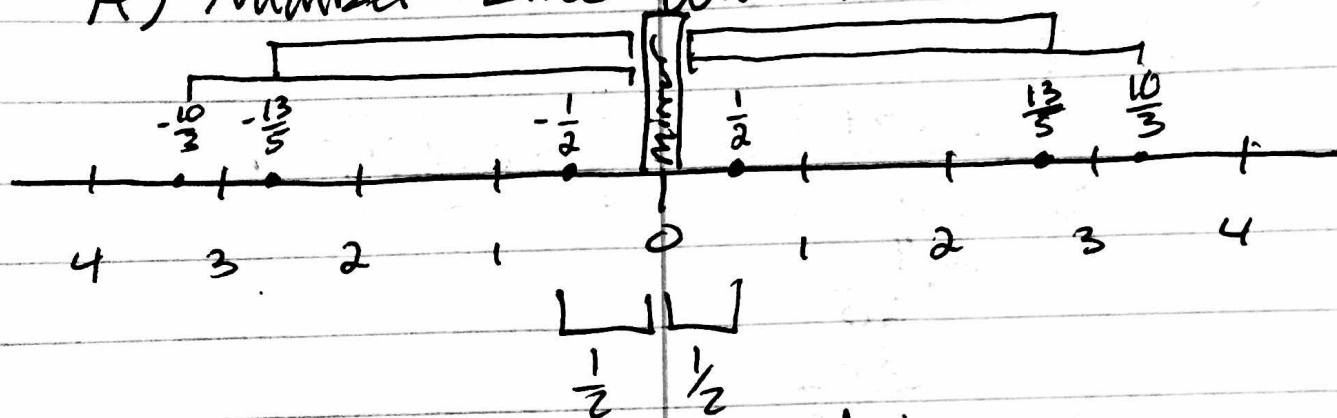
Math 7/8

9/2/16

Notes

I. Absolute Value

A) Number Line with mirror



$-\frac{10}{3}$ and $\frac{10}{3}$ are the same distance from 0.

$-\frac{1}{2}$ and $\frac{1}{2}$ are the same distance from 0.

$-\frac{13}{5}$ and $\frac{13}{5}$ are the same distance from 0.

B) Fractions

$$|-\frac{11}{12}| = \frac{11}{12} \quad |\frac{26}{15}| = \frac{26}{15} \quad |-\frac{10}{3}| = \frac{10}{3} \quad |\frac{10}{3}| = \frac{10}{3}$$

C) Absolute Value is the distance a number is away from 0.

II. Expressing Numbers as Rationals in $\frac{m}{n}$ form

A) Integers

$$23 = \frac{23}{1} \quad -45 = -\frac{45}{1}$$

B) Fractions

$$11\frac{7}{9} = \frac{11 \cdot 9}{9} + \frac{7}{9} = \frac{106}{9} \quad -\frac{16}{21} = -\frac{16}{21}$$

C) Decimals

$$0.4 = \frac{4}{10} = \frac{2}{5} \quad -0.186 = -\frac{186}{1000} = -\frac{93}{500} \quad 30.5 = 30\frac{1}{2} = \frac{61}{2}$$

$$-1.44 = -\frac{144}{100} = -\frac{36}{25}$$

III. Writing Rational Numbers as Decimals

A. $\frac{3}{8}$ Using Long Division

1) $\frac{3}{8}$

$$\begin{array}{r} 0.375 \\ 8 \overline{) 3.000} \\ \underline{24} \\ 60 \\ \underline{56} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

$$\frac{3}{8} = 0.375$$

2) $6\frac{2}{25}$

$$\begin{array}{r} 0.08 \\ 25 \overline{) 2.00} \\ \underline{200} \\ 0 \end{array}$$

$$6\frac{2}{25} = 6.08$$

IV. Number Line and rationals

A. Write Rational Number as a decimal

B. Locate ~~Numbers~~ ^{Integers} it lies between

C. Divide up the distance between the Integers by the denominator.

D. Use the segments to find the location.

E. Examples: -1.5 $\frac{15}{4}$

V Homework P. 14 1-4, 5-8, 11-16

P. 25 1-6, 7-12, 21