

Sec 1.1 RATIONAL NUMBERS p.2

RATIONAL # = ANY # THAT CAN BE WRITTEN AS $\frac{a}{b}$

$a \neq b = \text{integers}$

$$b \neq 0$$

NOTE:

$$\frac{-4}{5} = \frac{-4}{5} = \frac{4}{-5}$$

$$-(4 \div 5) \quad -4 \div 5 \quad 4 \div -5$$

$$-0.8 = -0.8 = -0.8$$

FRACTIONS CAN BE WRITTEN IN 2 WAYS:

① TERMINATING DECIMAL

$$\text{ex) } -\frac{5}{2} = -2\frac{1}{2} = -2.5$$

↓
DECIMAL
ENDS
(TERMINATES)

② REPEATING DECIMAL

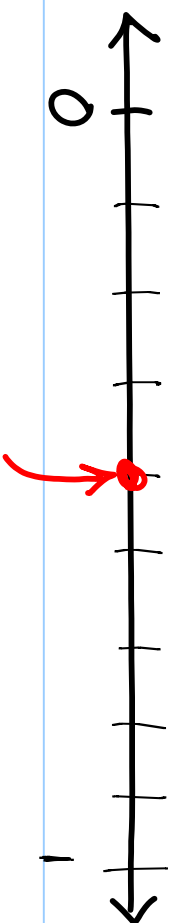
ex) $-\frac{4}{3} = -1\frac{1}{3} = 1.\overline{3}$

$\frac{2}{3} = 0.\overline{6}$

$\frac{5}{9} = 0.\overline{5}$

$0.\overline{12} = \frac{12}{99} \quad 0.\overline{3} = \frac{3}{9} = \frac{1}{3}$

$0.\overline{624} = \frac{624}{999} \quad 0.\overline{6} = \frac{6}{9} = \frac{2}{3}$



$$0.\overline{4} = \frac{4}{9}$$

← TELLS YOU THE
DIVISIONS NEEDED

* REPEATING DECIMALS ARE EASIER TO
PLOT ON A # LINE IN FRACTIONAL FORM

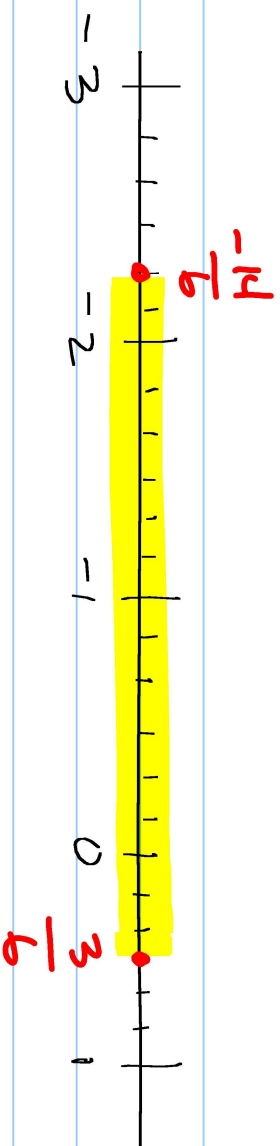
EXAMPLES

1) WRITE 3 RATIONAL #S BETWEEN $-\frac{7}{3}$ & $\frac{1}{2}$

* CHANGE TO COMMON DENOMINATOR!

$$-7x^2 = -\frac{14}{3}$$

$$\frac{1}{2}x^3 = \frac{1}{3}$$



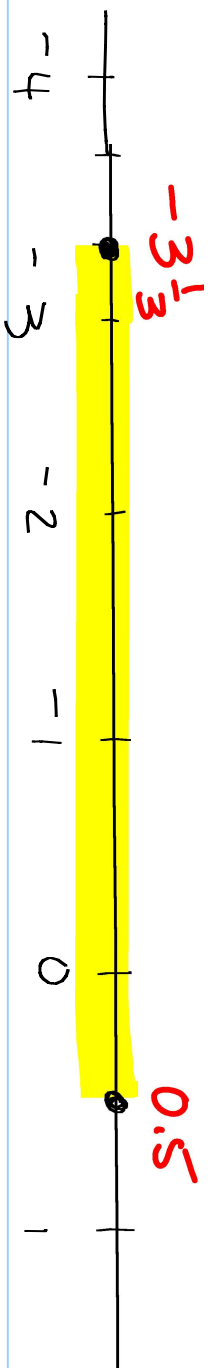
POSSIBLE ANSWERS

$$0, -1, -2, \frac{1}{6}, -\frac{1}{6}$$

2) WRITE 3 RATIONAL #S BETWEEN $-3.\bar{3}$ & $0.\bar{5}$

COULD CHANGE ↓ ↓

TO FRACTIONS $-3\frac{1}{3}$ $\frac{1}{2}$



"Rough"

Possible answers

$-3, -2, -2\frac{1}{2}, 0$

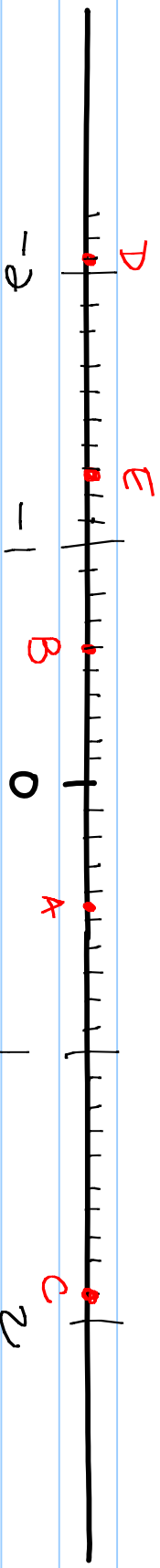
LINE

(Approx.)

3) PUT THE FOLLOWING IN ORDER USING A # LINE.

0.45 -0.6 1.9 -2.1 -1.3

* WHEN IN DECIMAL, # LINE HAS 10 DIVISIONS.



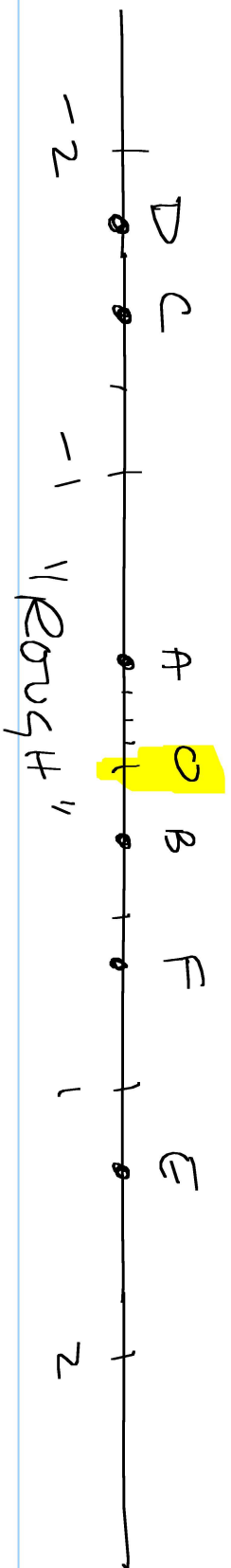
4) PUT THE FRACTIONS IN ORDER FROM LEAST
TO GREATEST.

$$-\frac{3}{8} \quad \frac{1}{4} \quad -\frac{3}{2} \quad -1\frac{3}{4} \quad \frac{8}{6} \quad \frac{7}{12}$$

1ST METHOD: CHANGE TO DECIMAL & THEN
you could use # line (ex 3)

A $-\frac{3}{8} = -0.375$ **C** $-\frac{3}{2} = -1.5$ **E** $\frac{8}{6} = 1.\bar{3}$

B $\frac{1}{4} = 0.25$ **D** $-1\frac{3}{4} = -1.75$ **F** $\frac{7}{12} = 0.5\bar{83}$



D C A B F E

2nd METHOD : COMMON DENOMINATOR

A $-\frac{3}{8}$

C $-\frac{3}{2} = -\frac{12}{8}$

E $\frac{8}{6} = \frac{16}{12}$

B $\frac{1}{4} = \frac{3}{12}$

D $-\frac{1}{3} = -\frac{4}{12}$

F $\frac{7}{12}$

D C A B F E

HINT: SEPARATE - FROM + & COMPARE
SEPARATELY

P.7 # 1-24 NOVICE # 1-35 EXPERT

... # 1-29 APP.