S-A2 Algebra 2 Session 1 6/4

"opposite" → sign change "reciprocal" → "flip" (inverse)

opposite of 3 → −3

opposite of −8 → 8

reciprocal of $\frac{3}{4} \rightarrow \frac{4}{3}$

reciprocal of $\frac{7}{1} \rightarrow \frac{1}{7}$

reciprocal of $\frac{1}{3} \rightarrow \frac{3}{1} = 3$

reciprocal of $\frac{0}{1} \rightarrow \frac{1}{0}$ undefined

opposite reciprocal

opposite reciprocal

$\frac{8}{9} \rightarrow -\frac{8}{9} \rightarrow \boxed{-\frac{9}{8}}$

opposite reciprocal

1.) $\frac{3}{5} \rightarrow \frac{-3}{5} \rightarrow \boxed{-\frac{5}{3}}$

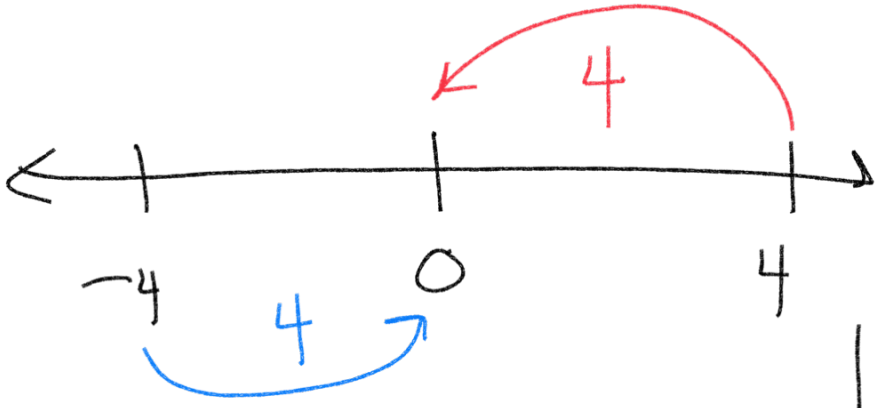
2.) $-2.4 \rightarrow 2.4 \rightarrow \boxed{\frac{1}{2.4}}$

3.) $2\frac{1}{4}$ $\frac{(2*4)+1}{4} = \frac{9}{4}$ opp $-\frac{9}{4}$ reciprocal $\boxed{-\frac{4}{9}}$

4.) $\pi + 2 \rightarrow -(\pi+2) \rightarrow \boxed{\frac{-1}{\pi+2} \text{ or } \frac{1}{-\pi-2}}$

Absolute Value $|4| = 4$ $|-4| = 4$

Absolute value is the distance from the number to zero on the number line.



$|-3| = 3$ $-|7| = -7$

$|(4-12)| = |-8| = 8$

$|5| - |-6|$

$5 - 6 = \boxed{-1}$

Real Numbers

rational

irrational

Imaginary Numbers

rational – can be put into a fraction

ratio → fraction

Rational Numbers

Counting Numbers — 1, 2, 3, 4, 5, . . .

Whole Numbers — 0, 1, 2, 3, 4, 5, . . .

All counting numbers and 0

Integer — All whole numbers and their opposites

. . . -3, -2, -1, 0, 1, 2, 3 . . .