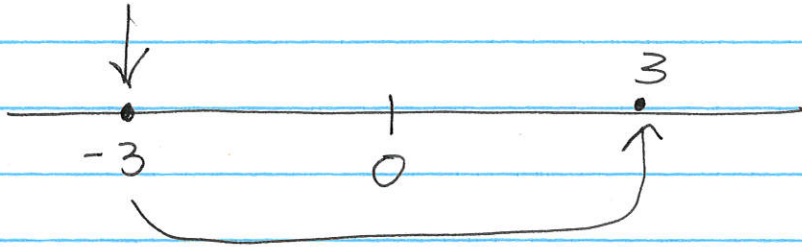


# Signed Numbers

multiplication by -1



$$-1(-3) = --3 = 3$$

↑  
go to the other side of zero

## Practice

$-2(-3)(-5)$  now without the minuses  
 $6(5) = 30$  but which side of

zero is it on.

start w/  $-2$

left of zero

$-3$

other side to be right of zero

$-5$

other side - left

its  $-30$

~~PA~~

$$\frac{-1}{-3(-4)}$$

3 minus signs

left right left

$$-\frac{1}{12}$$

## Comparatives in signed numbers

$$-2(-3) = +6 > 5$$

$\frac{+}{-}$  is left of zero  $< 0.12$

$$-4 + -6$$

$$-10 < 0$$

$$5 - (-3) \longrightarrow +8 > 0$$

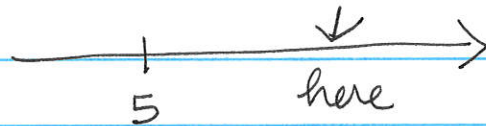
↙ below zero  
↑ other side

negatives & inequalities — keep the inequality pointing at the same number

$$-3x > 5$$

$$5 < -3x$$

so  $-3x$  is



in the positives

so

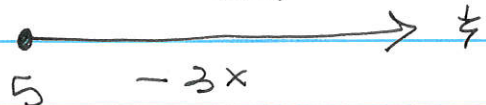
↳  $x$  is a negative number, which one

$$-3x > 5$$

multiply both sides by  $-1$

$$3x < -5$$

is take the ray



↳ so its now a  $\ominus$  number

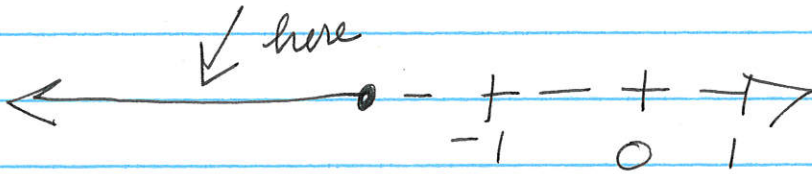
$$+3x$$



flip it to the other side of zero

divide both sides by +3

$$x < \frac{-5}{3}$$



problems

$$-x \leq -\frac{1}{2}$$

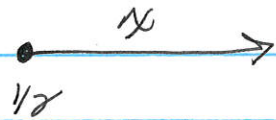
mult BS by -1

$$x \geq \frac{1}{2}$$

$$3 - x > 7$$

$$-x > 4$$

$$x < -4$$

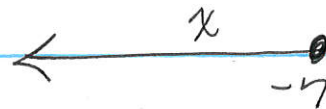


$$\text{or } \left[ \frac{1}{2}, \infty \right)$$

$$(-\infty, -4) \text{ or } \leftarrow x \text{ at } -4$$

$$-5x \geq 35 \text{ divide BS by } -5$$

$$x \leq -7$$



$$(-\infty, -7]$$