

BE-1A TUESDAY 2-17-09

① Solve: $2x - 3 = 16$

② Solve $-\frac{3}{4}x = 24$

③ Solve $7x + 4 = -2x - 3$

④ Solve $3(2x - 6) = 5(x + 1)$

⑤ WHICH STATEMENTS ARE TRUE AND WHICH ARE FALSE?

Ⓐ $6 < 12$

Ⓓ $2 \geq 0$

Ⓑ $7 > 19$

Ⓔ $0 > -1$

Ⓒ $4 \leq 4$

Ⓕ $\frac{1}{2} < 2$

$<$ less than $>$ greater than

$\leq$ less than or
EQUAL $\geq$ greater THAN or
EQUAL

IN EQUALITIES $\Rightarrow$ NOT EQUATIONS

Start WITH $6 < 12$

Try $+2$, then -2

• 2 , then $\div 2$

• -2 , then $\div -2$

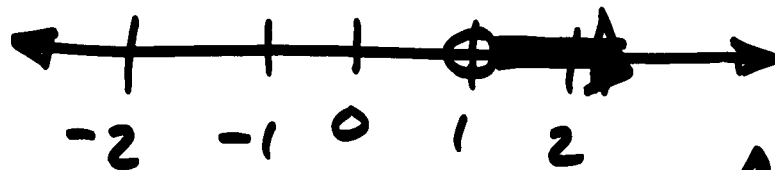
GRI $\Rightarrow$ GOLDEN RULE of INEQUALITIES

Whatever you DO TO ONE SIDE,
do to the other AND

if you multiply or divide by a negative,
Flip the inequality symbol.

(EX)	$2x - 3 < 16$	{	$-2x - 3 < 16$
	$\quad +3 \quad +3$		$\quad +3 \quad +3$
	$2x < 19$		$-2x < 19$
	$x < \frac{19}{2}$		$x > -\frac{19}{2}$

GRAPHING ANSWERS ON A NUMBER LINE:

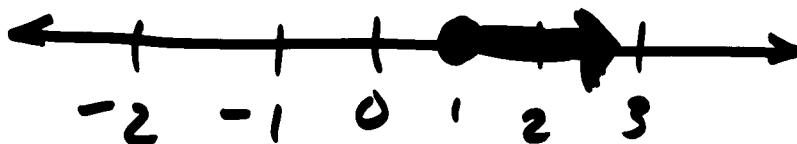


$$x > 1$$

* (M) NOTE DIRECTION OF ARROW

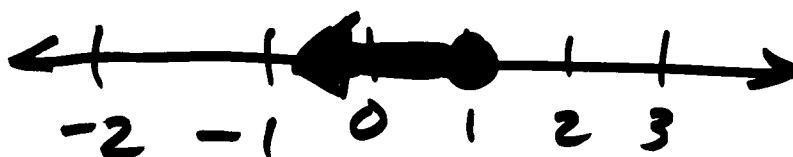


$$x < 1$$



$$x \geq 1$$

NOTE ● DOT



$$x \leq 1$$

<, >
○

≤, ≥
●

Finally, to get the variable
on the left:

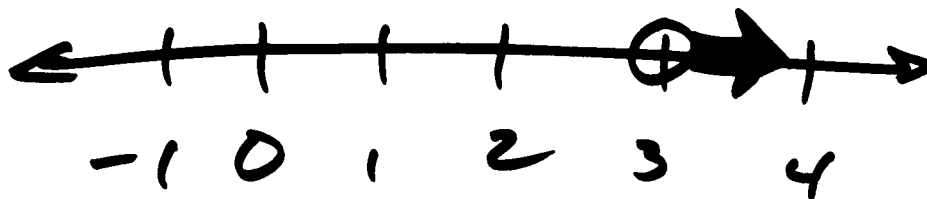
$$X = 3 \quad \text{or} \quad 3 = X$$

No problem.

BUT $3 < X$

means $X > 3$

MUST flip when
you change sides!



$$X > 3$$

Ch. 6-1 to 6-3

Solving Inequalities

WATCH OUT for the 2 special cases: do everything right, variable "goes away" left with,

true (EX) $3 < 8 \Rightarrow$ ALL REAL NUMBERS

false (EX) $3 > 8 \Rightarrow$ NO SOLUTION.

Ch. 6-3

(EX) $\frac{9}{5}C + 32 > -31$

(EX) $-7b + 19 < -16$

(EX) $3N - 18 \geq 5N + 21$

(EX) $3d - 2(8d - 9) > 3 - (2d + 7)$

(EX) $8(t + 2) - 3(t - 4) < 5(t - 7) + 8$

Homework: Pg 335 #15-23 No checks.
(GRAPH ANSWERS TO 15 AND 16)