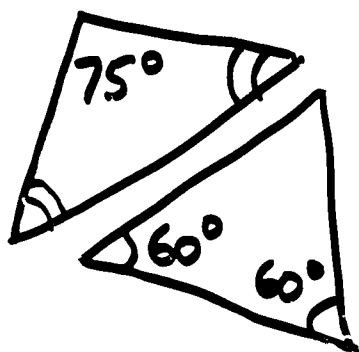


Alg. 1-BE TUESDAY 3-31-09

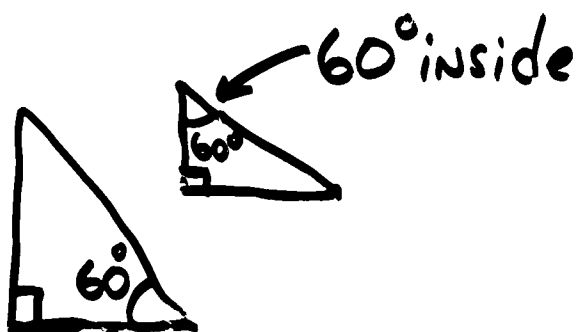
* Happy BIRTHDAY RENE DES CARTES - 3/31/1596 *
COGITO ERGO SUM

① ARE THE TRIANGLES SIMILAR? Justify.

①



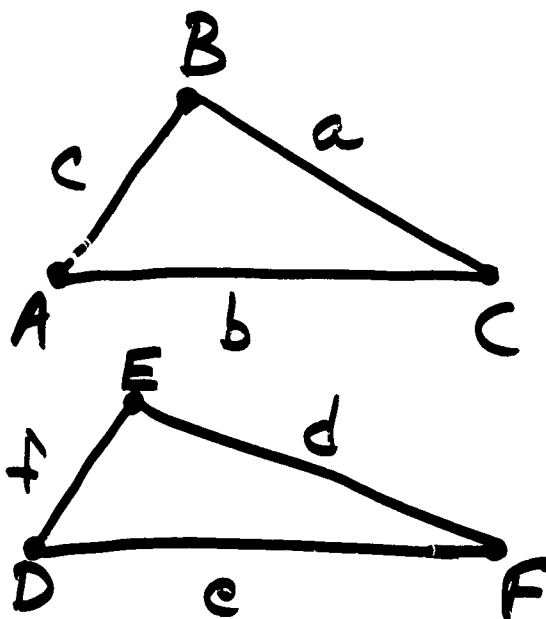
②



② Find e, f
for these
similar
triangles
if:

$$a = 5 \quad d = 10$$

$$b = 8 \quad c = 7$$



• Homework review: Pg. 619 #11-14, 17-19.

Compound $\Rightarrow$ MORE THAN ONE

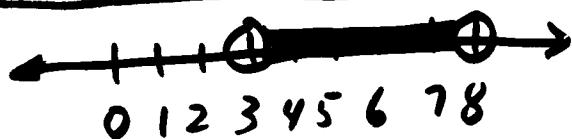
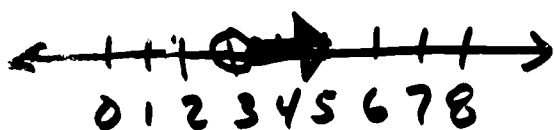
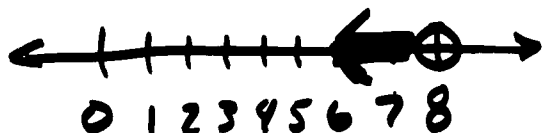
1.

Two types of compound inequalities:

AND

BOTH INEQUALITIES MUST
BE TRUE

EX) $x < 8$ AND $x > 3$



$x < 8$ AND $x > 3$

or

$3 < x < 8$

or

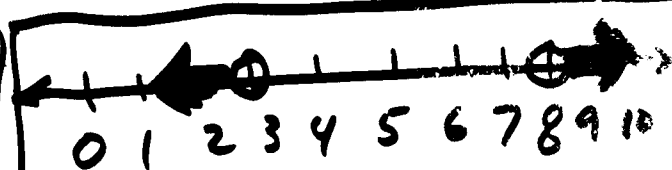
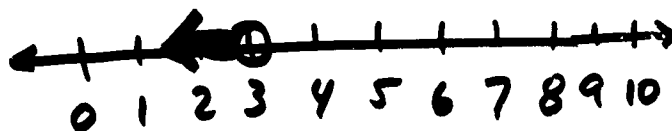
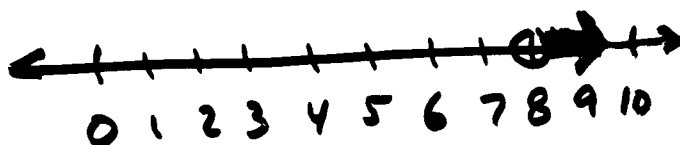
$8 > x > 3$

SHORTHAND FOR ANDS ONLY

OR

ONE OR BOTH OF
THE INEQUALITIES
MUST BE TRUE

EX) $x > 8$ OR $x < 3$



$x < 3$ OR $x > 8$

Normal **AND** graph:



NEVER AN "OR"

Normal **OR** graph:



NEVER AN "AND"

SPECIAL "OR" or "AND" THAT 'GOES ONE WAY'
WATCH OUT!

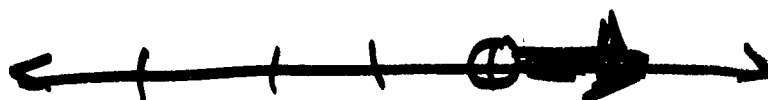
(EX)



-2 -1 0 1 2

$$x > -2 \text{ or } x > 1$$

(EX)

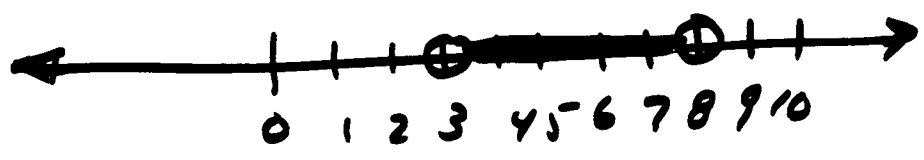


-2 -1 0 1 2

$$x > -2 \text{ and } x > 1$$

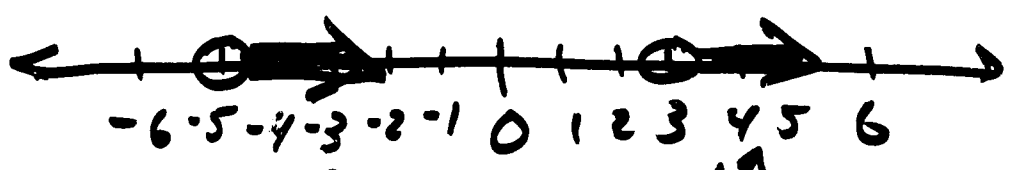
Ex) SOLVE AND GRAPH SOLUTION:

$$\begin{array}{ccc} 6 < w + 3 & \text{AND} & w + 3 < 11 \\ -3 & & -3 & -3 \\ 3 < w & & & \\ \boxed{w > 3} & \text{AND} & \boxed{w < 8} \end{array}$$

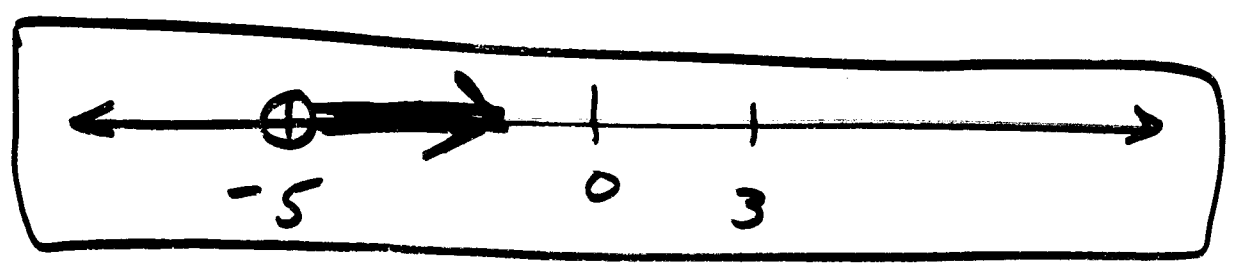


EX 4
pg 341

$$\begin{array}{ccc} -3h + 4 < 19 & \text{OR} & 7h - 3 > 18 \\ -4 & & -4 & \{ & +3 & +3 \\ \frac{-3h}{-3} < \frac{15}{-3} & & \frac{7h}{7} > \frac{21}{7} \\ \boxed{h > -5} & \text{OR} & \boxed{h > 3} \end{array}$$

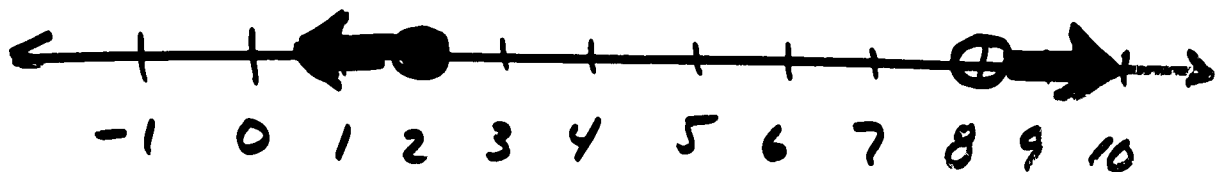


THIS INCLUDES THIS PART



Solve AND graph:

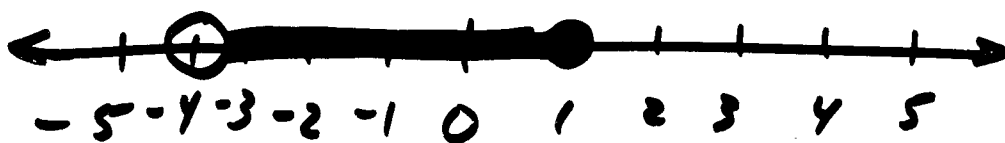
(EX) $x - 7 \leq -5$ or $x - 7 > 1$
 $\quad +7 \quad +7 \quad \quad +7 \quad +7$
 $\boxed{x \leq 2}$ or $\boxed{x > 8}$



(EX) $-8 < x - 4 \leq -3$

SHORTHAND WAY OF WRITING

$-8 < x - 4$ **AND** $x - 4 \leq -3$
 $+4 \quad +4 \quad \quad +4 \quad +4$
 $-4 < x$
 $\boxed{x > -4}$ **AND** $\boxed{x \leq 1}$



Going from long way TO SHORT WAY
to write "ANDS"

(EX) $x > -2$ AND $x < 5$

TO use two $<$, $<$, PUT smallest
number first:

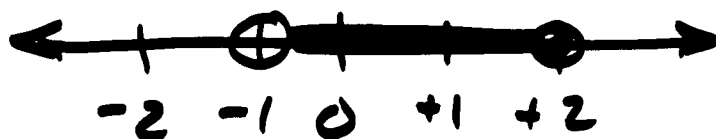
$$-2 < x < 5$$

TO use two $>$, $>$, PUT largest first:

$$5 > x > -2$$

Go from graph TO compound inequality:

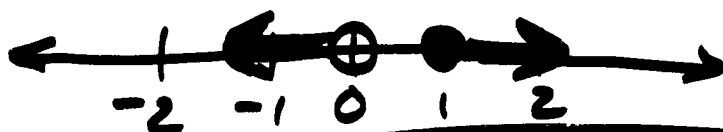
(EX)



$$x > -1 \text{ AND } x \leq 2$$

$$-1 < x \leq 2$$

(EX)



$$x < 0 \text{ or } x \geq 1$$

Homework: • Read Ch 6-4 • Pg 342 #14-22