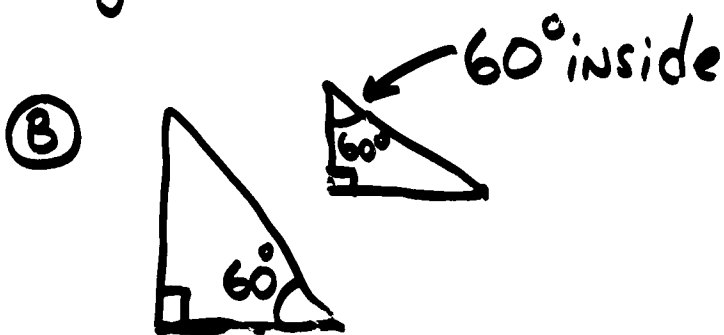
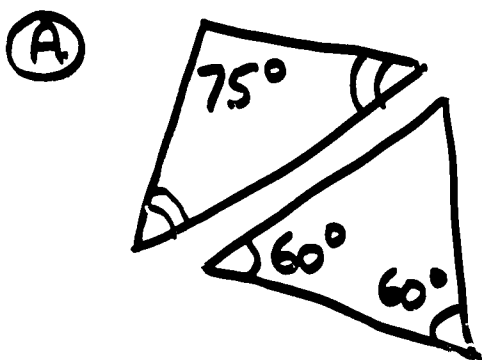
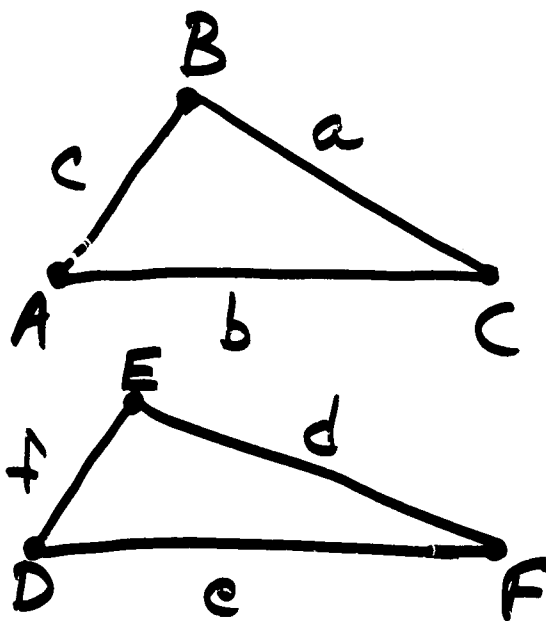


① ARE THE TRIANGLES SIMILAR? Justify.



② Find e, f
for these
similar
triangles
if:
 $a=5$ $d=10$
 $b=8$ $c=7$



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

Compound \Rightarrow MORE THAN ONE

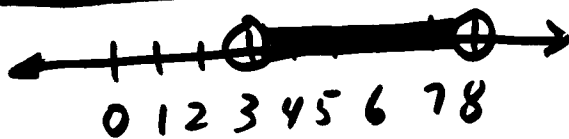
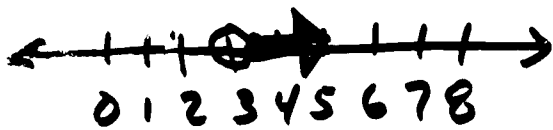
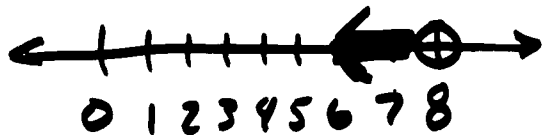
1.

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

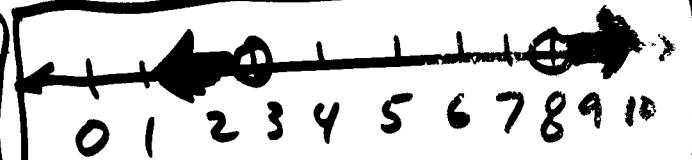
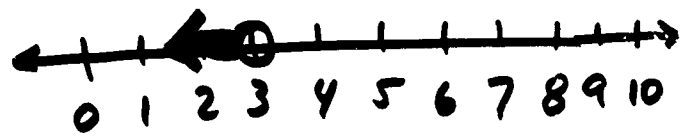
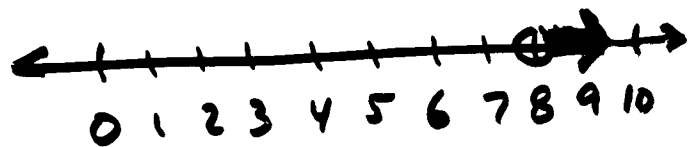
$8 > x > 3$

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** graphs:



NEVER AN "OR"

Normal **OR** graphs:



NEVER AN "AND"

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

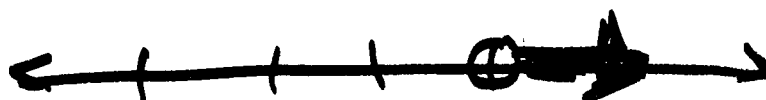
(EX)



-2 -1 0 1 2

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

(EX)

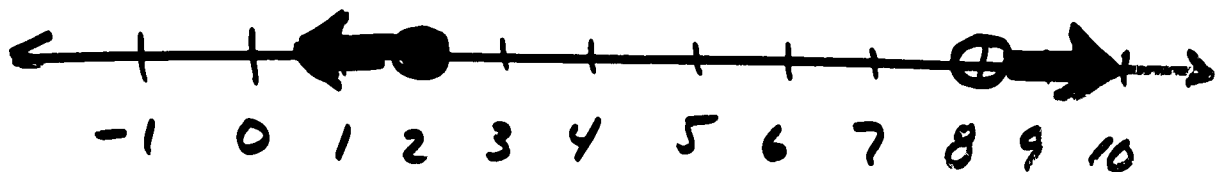


-2 -1 0 1 2

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

Solve AND graph:

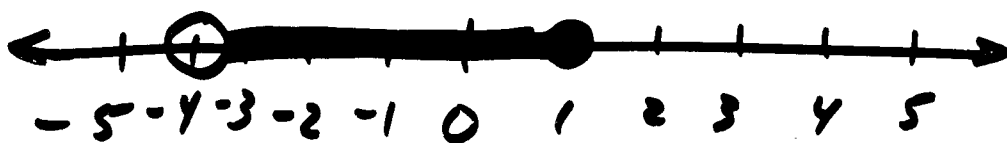
$$\textcircled{\text{EX}} \quad \begin{array}{ccc} x-7 \leq -5 & \text{or} & x-7 > 1 \\ +7 & & +7 \\ \boxed{x \leq 2} & \text{OR} & \boxed{x > 8} \end{array}$$



$$\textcircled{\text{EX}} \quad -8 < x-4 \leq -3$$

SHORTHAND WAY OF WRITING

$$\begin{array}{ccc} -8 < x-4 & \boxed{\text{AND}} & x-4 \leq -3 \\ +4 & & +4 \\ -4 < x & & \\ \boxed{x > -4} & \text{AND} & \boxed{x \leq 1} \end{array}$$



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

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

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

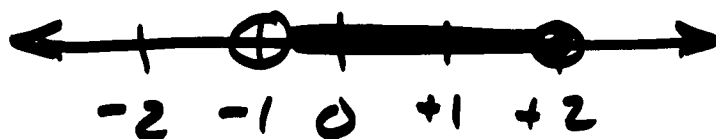
$$-2 < x < 5$$

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

$$5 > x > -2$$

Go from graph TO COMPOUND INEQUALITY:

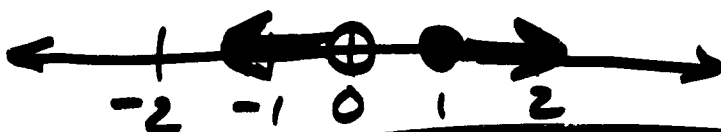
(EX)



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

$$-1 < x \leq 2$$

(EX)



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

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