Chapter 3 Notes Algebra 1 name per

(3-1)	(3-1) INEQUALITIES/			: any number that can make an inequality true.				
	GRAPHS	x	< 4 :		<i>x</i> ≤ 13 :	<i>x</i> ≥ -6 :	<i>x</i> > -9 :	
Vocabulary:	" x is 8"							
	less than	greater than						
	less than or equal t	o greater than or equal to						
	no more than	r	no less t	han	at m	nost	at least	
	Maximum	_						
	ENTIFY SOLUTION	EX	2:					
E	BY EVALUTATION:	ls e	ach of th	ne nu	mbers a so	lution for	3 + 7x ≥ -13	
1.) plug in	a value using()to	a.)				b.)		
deterr	nine if it's a solution							
GRAPHI	NG INEQUALITIES	EX 4: Represent ALL possible solutions!!!						
Reading grap	ohs:	Open circle: Closed circle:						
Making a gra	<mark>ph</mark>	a.)	x ≥ -3					
1.) Draw line a	a straight edge							
2.) Write the a	inswer in the center							
3.) Write 2 #'s	on both sides	b.)	½ >y					
to create a	n accurate #line.							
4.) Use open/	closed circle and							
draw an ar	draw an arrow indicating the		x ≤ -3					
other poss	ible solutions.							
		d.)	-5 < x					
Write an inequ	ality from a graph:							
1.) Pick a varia	ble	a.)				b.)		
2.) choose corr	ect sign for the dot							
3.) Use the nun	nber below the dot							

(3-2, 3-3)		SOLVING	: there are	infinite possible answers	. We are only solving for 1	
INEQUALITIES			solution. The graph will represent the other possible solutions.			
1.) Use algebra rules to solve			EQUIVALE	ENT INEQUALITIES		
inequalities						
2.) Check algebr	a by p	lugging in				
answer.						
3.) Check Inequa	ality by	, plugging				
in a possible	solutio	n.				
Ado	ling/S	ubtracting				
a.) Problem		√ alget	ora (use =)	inequality	Graph	
b.)						
APPLICATIO	N EX	(3: Maximur	n load of a ch	nair lift is 680 lbs. A cyclist	weighs 124 lbs and the bike is	
	32	lbs. Write a	in inequality s	showing how much more it	can carry safetly?	
EX 3: Equation \sqrt{algeb}		ora (use =)	√ inequality	Graph		
APPLICATION	EX 4:	Your class b	brought 42 bla	ankets on Monday and 65 b	blankets on Wednesday. Write	
	an ine	equality to de	scribe how m	nany blankets he class mus	t donate on Friday to make or	
	Exceed their goal of at least 160 blankets?					
EX 4: Problem	n	√ alge	bra (use =)	√ inequality	Graph	

	Multiplicatio	n/Division			
RULE!!	!!				
lr	nequality	√ alget	ora (use =)	inequality	Graph
a.)					
b.)					
c.)					
APPLI	CATION EX 3	: We want to	buy food for	a food bank. A case of sau	uce costs \$13.75. What is the
	great	est number o	f cases the s	tudent council can buy if th	ey use at most \$216?
EX 3:	Inequality	√ algeb	ora (use =)	√ inequality	Graph
	CATION EX 4	: Students in	the school ba	and are selling calendars.	They earn \$.40 on each
	calen	dar they sell.	Their goal is	s to earn more than \$327.	Write and solve an inequality
	to fine	d the fewest r	number of ca	lendars they can sell and s	till reach their goal?
EX 4:	Inequality	√ alget	ora (use =)	inequality	Graph

(3-4) <mark>MULTI STEP IN</mark>	EQUALITIES Solve as a	n equation. Don't forget r	ule for m/d by neg. numbers.
Problem	algebra (use =)	inequality	Graph
EX 1:			
APPLICATION E>	K 2: The school band wants the school band	he length of its banner to be	e 18 feet. No more than 48 feet
of	f trim can be used. What are	the possible widths of the l	banner?
EX 2: Problem	algebra (use =)	\checkmark inequality	Graph
EX 3:			
EX 4:			

EX 5:							
(3-5)	COI	MPOUND	: 2 inequal	ities that are joined by the	e word AND or the word OR		
	INEQL	JALITIES	create a compound inequality				
	'OR"		EX 4: Gra	ph and write an inequali	ty for all real numbers that are		
Any num	ber that i	makes	less than -	3 <u>or</u> greater than 7.			
either in	equality '	"true"					
1.) write 2 inec	qualities v	vith "or"					
2.) graph exter	nds in both	n directions					
with an oper	n circle						
APPLICATION		EX 4a.) Discounted fares are available to children 12 and under					
	Write 2	inequalities	OR to adults at least 60 years of age.				
	with the w	word "OR"					
Solving			EX 5:				
1.) Solve each	n individu	ally					
2.) graph on c	ne graph	۱.					
			EX 6:				

"AND"	EX1: Write an inequality for all real numbers
*Final answer should have ONLY	that are at least -2 and at most 4
Less than	
or	
Less then/equal to	
Writing a compound inequality	
* Must be true for both solutions	
* 2 dots on graph	
shade between them	
APPLICATION	EX 1a.) Today's temperature will be above 32° F,
	but not as high as 40 ° F.
Write your inequality as one long	
inequality with the variable in the	
middle!	
greater than ends up in front of	
the variable as the "less than"	
Solving compound inequality	EX 2: Solve and Graph
1.) Isolate the variable to the	
middle of the inequality	
use lines to show ALL three	
parts of the inequality!!	

When final answer has only	EX 2a:
"greater than" signs, you need	
to rewrite using less than	
FINDING AVERAGES	EX 3: Acidity in water Average of three readings is between
FINDING AVERAGES1.) Add up totals and divide by	EX 3: Acidity in water Average of three readings is between 7.2 and 7.8, inclusive. Readings are 7.4 and 7.9. What are the
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(3.6) ABSOLUTE VALUE	EX 1: Solve
EQUATIONS AND	
EQUATIONS	
1.) Get the absolute valueALONE	
2.) Set up two equations	EX 2:
One with the positive answer	
One with the negative answer	
3.) Solve BOTH to find both	
possible solutions!	
	EX 3:
DO NOT DISTRIBUTE TO A.V.	
A.V. OF A > "OR" ≥	EX 4: Solve and Graph
"Greater than" Compound inequality	
1.) set up two inequalities	
1 st without A.V.	
2 nd drop A.V.	
• make the answer negative,	
• flip the inequality symbol !!!	

A.V. OF A < "AND"	EX 5:	Solve and graph
"Less Than" Compound inequality		
One loooooooong inequality	/	
1.) A.V. drops and everything in		
It goes to the "middle	,	
Right side stays the same	•	
Left side make negative		
and use the same inequality	!	
2.) Solve		
	_	
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