		Revie	w for	- Test	#5 - Ing	quali	ities an	d Abs	olute	Value
Name	e								Class	
1.)	Wha	t is the sma	allest integ	jer value of	<i>x</i> that satisfi	es the in	equality 4 <i>x</i> +	-2 > 2x - 9	9?	
	(A)	-11	(B)	-7	(C)	-5	(D)	-1		
2.)	Whic	h number i	s <i>not</i> a m	ember of th	e solution se	t of -2 <i>x</i>	≤13?			
	(A)	-6.4	(B)	-6.5	(C)	-6.3	(D)	-6.7		
3.)	Whic	h element i	is in the s	olution set o	of the inequa	llity 8<3	x-1?			
	(A)	0	(B)	2	(C)	3	(D)	5		
4.)	If <i>a</i> i	s an intege	r, what is	the solutior	n set of $-4 \le$	<i>x</i> < 1?				(The second seco
	(A)	{-4,-3,-	2,-1,0}		(C)	{-4,-3	,-2,-1,0,1			
	(B)	{-3,-2,-	1,0,1}		(D)	{-3,-2	,-1,0}			
In 5 ·	– 8, g	raph the do	ouble ineq	ualities. Wr	ite the answ	er in inte	rval notation.			
5.)	X > .	3 and $x \le 7$	,			6.)	x < -9 or	<i>x</i> > –5		
	<b>←</b>					• •				
7.)	–2≤	<i>x</i> < 1				8.)	$x \ge 8$ and	l <i>x</i> ≤ 3		
	◄					►	•			

9.) Solve and graph the inequality  $4x - 2(x+1) \ge 3x$ . Write your answer in interval notation.

10.) Jared went to the store and wanted to spend *at most* \$48. He bought a DVD and a poster. The DVD cost eight more than four times the cost of the poster. How much did the DVD cost?

For 11 - 13, solve and graph the compound inequality. Write your answer in interval notation.

11.)  $-5 < 3x + 7 \le 28$ 

12.) 2y > y - 3 or 3y < y + 6

13.) 5 < -2x + 9 < 11

For 14 – 16, solve the following absolute value equations. 14.) |2x-1|+3=6



15.) |5x+4|+10=2

16.) |x-7| = 2x-2

17.) Solve the following system of inequalities graphically. State one point that will satisfy the solution.

2y < x + 2 $-3y \le 3x - 6$ 



18.) Emily babysits for \$4 per hour. She also works as a tutor for \$7 per hour. She is only allowed to work 13 hours per week. She wants to make at least \$65. Write and graph a system of inequalities to represent this situation.a.) Write and graph a system of inequalities to represent this situation.

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 b.) What is a possible combination of hours you can work at each job? Justify your answer.

## Selected Answers (Check my website for a thorough answer key)

1.)	C		2.)	D	
3.)	D		4.)	A	
5.)	(3,7]		6.)	(-∞,-9)∪(-5,∞)	
7.)	[-2,1)		8.)	No solution	
9.)	<i>x</i> ≤ −2	[2,∞)	10.)	\$40	
11.)	$-4 < x \le 7$	(-3,7]	12.)	<i>y</i> > -3 or <i>y</i> < 3	(-∞,∞)
13.)	-1 < <i>x</i> < 2	(-1,2)	14.)	{2,-1}	
15.)	no solution		16.)	{3}	