

I. Complete the chart below using the appropriate notation(s).

Inequality Notation	Interval Notation	Graph (on a number line)
1.) $x \geq -3$		
2.)		
3.)	$(-\infty, 1)$	
4.) $\mathbb{R}, x \neq 0$		
5.)		
6.) $x < 3, x \neq -2$		

II. Solve each linear inequality (use int. not). Must show work!

7.) $2(x - 1) \leq 2 + 2(1 + 7x)$	8.) $\frac{4x + 2}{6} < \frac{2x + 1}{3}$	9.) $6[5y - (3y - 1)] \geq 4(3y - 7)$
-----------------------------------	---	---------------------------------------

III. Solve each compound inequality or absolute value inequality (use int. not). Must show work!

10.) $10 + 7x \leq -4$ or $8 - 4x < 0$	11.) $-7 < 5 - 6x \leq 23$	12.) $-8x - 1 \leq -41$ and $9x - 3 < 24$
13.) $ 10 + 5x < 20$	14.) $8 - 7 -8x - 2 \geq -34$	15.) $4 + 5 -6x - 10 > 104$

IV. Complete each inequality word problem. Must show work!

16.) Craig is delivering boxes of paper to each floor of an office building. Each box weighs 64 lb and Craig weighs 160 lb. The elevator can hold no more than 2,000 lb. How many boxes can Craig safely take on each elevator trip?	17.) The final grade for a class is calculated by taking 75% of the average test score and adding 25% of the final exam score. Jane has a 76 test average. What score does she need to get on the final exam to get at least a final grade of 80?
--	---

V. Graph each inequality and shade accordingly. Must show work!

18.) $f(x) \leq x - 2 + 6$	
19.) $f(x) > x + 4 - 6$	