HW 2

Christian

I've completely randomized the following problems so you won't be able to cheat. Recall how to graph on the real number line. If x is taken to be your variable, you will shade in the regions for which the statement is true. For example, if you're trying to plot $x < 10$, you will shade in everything to the left of $x = 10$ (because everything to the left of $x = 10$ is where $x < 10$) and leave unshaded everything to the right of $x = 10$ because that's where $x > 10$.

Since the problems are randomized, you may have a contradiction such as $x < 10$ and $x > 11$. If that's the case, don't plot anything and write ϕ down.

Also there's a challenge problem at the end. This one is worth 2 homework passes.

Problem 0. On the real number line, plot $x \leq -2$ or x ≥ 9 and describe the geometric object.

Problem 1. On the real number line, plot $x \leq 0$ or x ≥ -4 and describe the geometric object.

Problem 2. On the real number line, plot $\mid x \mid \geq 1$ and describe the geometric object.

Problem 3. On the real number line, plot $\mid x \mid \leq -9$ and describe the geometric object.

Problem 4. On the real number line, plot $x \leq 9$ and describe the geometric object.

Problem 5. On the real number line, plot $x \leq 10$ or x ≥ 9 and describe the geometric object.

Problem 6. On the real number line, plot $\mid x \mid \leq 2$ and describe the geometric object.

Problem 7. On the real number line, plot $\mid x \mid \geq -6$ and describe the geometric object.

Problem 8. On the real number line, plot $x \leq 1$ and x ≥ -4 and describe the geometric object.

Problem 9. On the real number line, plot $x \leq 10$ or x ≥ -10 and describe the geometric object.

Problem 10. On the real number line, plot $x \geq 7$ and describe the geometric object.

Problem 11. On the real number line, plot $x \leq 2$ and x ≥ 6 and describe the geometric object.

Problem Challenge. Recall that a *postulate* is a statement that we *define* as being true. It cannot be logically deduced from other postulates like a *theorem* can. The Segment Addition Postulate and Ruler Postulate seem redundant. Are they redundant? Why or why not?