1. **(15 Points Each)** Clearly write True or False in the blank.

   (a) _________ P-sel ⊆ NP/n + 1
   (b) _________ P-sel ⊆ NP/n

2. **(20 Points)** Fill in the blank: Recall the standard enumeration of Turning Machines from Computability Theory. $A = \{ x \mid M_{|x|}(|x|) \text{ halts} \}$ is in $P/\cdots$. Please fill in the least number of advice bits needed, not just 'poly'.

3. **(50 Points)** Show that if $G$ is a graph representing a $k$-tournament, and winning is transitive (meaning if $v_1$ wins against $v_2$, and $v_2$ wins against $v_3$, then $v_1$ wins against $v_3$), then $(\exists w \in V_G)[R_{1,G}(w) = V_G]$. 
Fun. (0 Points) Write/Draw a Story! The end of the semester is coming up, so now is a better time than ever to de-stress from it! Write us a funny story, or if you’re more of an artist, draw us something! Some potential prompts could be: Your feelings about this class, your Thanksgiving Break, or trying to summarize 2016 in a single idea! Just have some fun with this one!