

**Econ 702, Spring 2006**

**Problem Set 12 - Due Monday April 17**

All three problems below concern the "One sided lack of commitment" model studied in class on last Tuesday. A Social Planner guarantees utility  $V$  to an agent that can walk away at any time. The fruit that the agent consumes is  $s \in S$ ,  $s \sim iid$ . In this economy there is no storage, and so the agent just consumes the fruit in every period (if she does not accept the Planner's contract).

**Problem 1**

Prove that there exists an  $s^* \in int\{S\}$ , such that: for every  $s < s^*$ ,  $w_s$  is constant, and for every  $s_2 > s_1 \geq s^*$ ,  $w_{s_2} > w_{s_1}$ .

**Problem 2**

Examine the concavity properties of  $c_s$ . (I'm not really sure that this question has a certain answer, so if you see it's not working out don't spend too much time on it).

**Problem 3**

Consider  $c$  as a function of time. As we saw in class, the consumption can stay constant for a number of periods, and then jump to a new value (and stay there for some period). Solve for  $\bar{c}$ , i.e. the higher possible value that consumption can obtain in this model.