Economics 212 **Steven A. Matthews**
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Problem Sets

Problem Set 1 (Due Wednesday, 9/13)

1. A competitive market has n buyers, each one with the same downward-sloping demand function $d(p)$. Thus, the market demand function is $nd(p)$. The market supply function is $S(p)$, an upward-sloping function. Assume the functions d and S are both differentiable. Let $p^*(n)$ and $x^*(n)$ be the equilibrium price and quantity given a fixed n. Determine their comparative static properties. What further assumptions do you need to make?

   JR Exercises 1.2, 1.4, 1.7, 1.9

2. For $n = 1, 2$, define $\succsim_n$ on $\mathbb{R}^n_+$ by $x \succsim y$ iff $x \geq y$.[1] Determine whether $\succsim_1$ and $\succsim_2$ are complete, transitive, continuous, convex, and strictly convex.

[1] Recall our convention for vector inequalities: $x \geq y$ means $x_i \geq y_i \ \forall i$; $x > y$ means $x \geq y$ and $x \neq y$; and $x \gg y$ means $x_i > y_i \ \forall i$.