

Statistics 473: Game Theory
Problem Set 1

Due: Thursday January 24

Do the following problems from the text: 27.2, 31.2, 33.1.

1) Watch the following excerpt from the film *A Beautiful Mind*.

<http://www.youtube.com/watch?v=CemLiSI5ox8>

Consider the (admittedly sexist) strategic game where 4 men meet 5 women, one blonde and four brunettes, in a bar. Each man must decide to make a pass at the blonde or any of the brunettes. Each man prefers the blonde to the brunettes and prefers the brunettes to failure. If more than one man makes a pass at the blonde everyone will fail. If at most one man makes a pass at the blond everyone will succeed. Is the profile where every man makes a pass at a brunette a Nash equilibrium. What are the pure strategy Nash equilibria? Did the screenwriters get this right?