Quiz 7 for Statistics 213
Probability and Decision Theory - Spring 2002
Material Covered: Sections 9.4 and 9.5 of Workbook and text
Friday, 26th April

This is a 15 minute quiz, worth 5% and marked out of 5 points. The total possible points awarded for each question is given in square brackets at the beginning of each question. Anything that can fit on one side of an $8\frac{1}{2}$ by 11 inch piece of paper may be used as a reference during this quiz. A calculator and appropriate statistical tables may also be used. No other aids are permitted.

Name (please print): _____ . **ID Number:**
.

last first

---

1. Consider the following payoff matrix.

Player C → / Player R ↓	first option (1)	second option (2)	third option (3)
first option (1)	3	2	1
second option (2)	1	-2	3
third option (3)	6	4	1

(a) [1 point] The saddlepoint(s) is/are: _____

(b) [1 point] The minimax strategy for player C is: _____

(c) [1 point] The maximin strategy for player R is: _____

(d) [1 point] If $P = [0.1, 0.2, 0.7]$ and $Q = [0.7, 0.2, 0.1]^T$, the expected value of the game

is: _____

(e) [1 point] **True** / **False** Mixed strategies $P = [0.1, 0.2, 0.7]$ and $Q = [0.7, 0.2, 0.1]^T$ are optimal.

1.

(a) **none**

(b) strategy 2

(c) strategy 1 or strategy 3

(d) 3.95 (use PQR)

(e) **False** for example, $P = [0.1, 0, 0.9]$ gives an value of 4.85, which is larger than 3.75