

MATH 125 - Reading Assignment 7 - Section 9.4 - Spring 2008

Give it up for \_\_\_\_\_!

1. A \_\_\_\_\_ for a player with options 1 to  $n$  is a set of nonnegative numbers  $p_1, p_2, \dots, p_n$  summing to 1. The player using selects option  $i$  with probability  $p_i$ .
2. A \_\_\_\_\_ is a special case where one of the probabilities is 1 and the others are 0.
3. The expected value of a set of values  $x_1, x_2, \dots, x_n$  that occur with probabilities  $p_1, p_2, \dots, p_n$  summing to 1 is:
  
4. What are the two steps in computing expected payoff to a player when using the options described in question #1 are used by both players?
  
5. The \_\_\_\_\_ implies that there is a value  $v$  in a game in which players select different options with different probabilities at which the expected value of the Row Player is  $v$ , and expected value of the Column Player is  $-v$ , and neither player can do better by unilaterally changing strategies.
6. Suppose the reduced payoff matrix of a game is

		Column Player	
		C1	C2
Row Player	R1	$a$	$b$
	R2	$c$	$d$

The probability the Row Player opts for R1 is given by

The probability the Column Player opts for C1 is given by

The value of the game for the Row Player is