

Name: \_\_\_\_\_

## Economics 431 Quiz #2

Amy and Beth are competing sellers. Their price competition can be described by the following game, which is derived from the demand curve  $Q = 6 - p$ , where  $p$  dollars per unit is the lowest price, and where the game's payoffs represent the sellers' daily profits, in thousands of dollars.

		Beth's Price			
		\$1	\$2	\$3	\$4
Amy's Price	\$1	2.50, 2.50	5.00, 0	5.00, 0	5.00, 0
	\$2	0, 5.00	4.00, 4.00	8.00, 0	8.00, 0
	\$3	0, 5.00	0, 8.00	4.50, 4.50	9.00, 0
	\$4	0, 5.00	0, 8.00	0, 9.00	4.00, 4.00

(a) Enumerate Amy's best response function:

If Beth chooses \$1, then Amy's best response is \$1 .

If Beth chooses \$2, then Amy's best response is \$1 .

If Beth chooses \$3, then Amy's best response is \$2 .

If Beth chooses \$4, then Amy's best response is \$3 .

(b) Does this game have a Nash equilibrium? Yes

If so, describe one of the equilibria (what does each player choose?):

**Each player chooses \$1.**

Describe how you know this is a Nash equilibrium:

**It's a mutual best response.**