Sunday, October 4, 2020 4:43 PM

Worked W/ Dr Dewey's Solutions Passed Solution review

- **15.** Suppose you know the following for a particular three-player game: The space of strategy profiles S is finite. Also, for every $s \in S$, it is the case that $u_2(s) = 3u_1(s), u_3(s) = [u_1(s)]^2$, and $u_1(s) \in [0, 1]$.
 - (a) Must this game have a Nash equilibrium? Explain your answer.

Mz = 3 Juz

I'm trying to Fallow Your Solution because I don't understand.

Because us and us are quantities of ly they always try to maximize us. This means that vi is always an NE

(b) Must this game have an efficient Nash equilibrium? Explain your answer.

It is efficient because of versons stated in Part A

(c) Suppose that in addition to the information given above, you know that s^* is a Nash equilibrium of the game. Must s^* be an efficient strategy profile? Explain your answer; if you answer "no," then provide a counterexample.

there could be an inefficient, non-strict NE seconse conditions don't dictate only howing a Strict NE

W1, W2, U3

ALV and BLV are both NE, but ALV is inefficient