Assessment 5
Questions and Solutions

9PM-11PM Test

Q1. [22 marks] Allen and John are roommates who study at the UofT. They both prefer to use the living room rather than their bedroom to do their homework, but Allen likes working in the living-room more than John does. They recently had a big fight and are trying to avoid being in the same room. If they're in the same room, they will have a really bad fight again. Fighting makes them both very unhappy.

a. [10 marks] Create a payoff matrix consistent with the story in the question. While the actual numbers are not important, they must match the story.

Solution: Allen and John choose between studying in the Living Room and their own Bedroom.

Consider Allen's payoffs first. Suppose working in the bedroom results in a payoff of 40. This does not depend on what John does because Allen is all alone in his own bedroom. Since working in the Living Room is better than the bedroom, working in the living room when John is in the bedroom results in a payoff of 60. However choosing the living room when John makes the same choice is really bad and lets proxy that with a payoff of -10. This is summarized in the table below.

John