

Explorative Questions:

1. Since the min nodes for expectimax are chance nodes, pacman would think that it still have a chance to win; therefore it would proceed to go grab more food. On the other hand, for alpha-beta, the min node always choose its best move; therefore, the pacman choose to commit suicide to maximize its score. This is why sometimes expectimax sometimes outperform alpha-beta.
2.
 - a) True. If the min nodes always play its best move, the max node will be able to achieve V_M . Max node has a chance to do better than V_M (aka V_E) if min node plays randomly.
 - b) True. Doesn't matter what the min node does, Minimax guarantees to have a payoff that is at least V_M .
 - c) False. Max node will have to change its way of playing if it wants to result in a payoff that is at least V_E . The max node will only get V_E in expectation even if it follows the expectimax strategy.