1. _
    a. True: Because the piece cannot move diagonally and moves one space at a time the distance that is calculated is the sum of the horizontal and vertical distance from goal A to goal B called the Manhattan Distance. It is an admissible heuristic because all any move can do is move it one step closer to its goal. The piece must be moved at least the number of spots between goal A and goal B.
    b. False: GA is not equivalent to a random walk in space. Although GA does use random functions it uses a fitness selection passing the more accurate "gene" to be used making it not completely random. It is influenced by the fitness to bring it closer to the goal.

2. _
    a. W = 0: f(n) = 2g(n)   uniform_cost search
    b. W = 1: f(n) = g(n) + h(n) a* search
    c. W = 2: f(n) = 2h(n)   greedy best-first search

3. _
    a. Simulated annealing: No, because it allows bad moves to occur and can often have a random restart in the limited space
    b. A* algorithm: Yes, A star will always have a successful solution. It is optimally efficient with no randomness involved.