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CSCE580
Quiz3

Q1: Search and Heuristics
- an admissible heuristics is a function in searching algorithms that never overestimates the cost to reach a goal.
- Yes a heuristic of "h=0" is admissible
- Yes a heuristic of "h=k" is admissible because it is always less than or equal to the cost.
- h = min(h1,h2,h3) may or may not be admissible. However taking the max: h = max(h1, h2, h3) is admissible.

Q2: Using search for a practical problem
Q2.1:
- It implements a 5-tuple state representation which includes the missionaries and cannibals on the left bank, missionaries and cannibals on the right bank, and the boat's position. An example goal would be   . It implements breadth first search.

Q3: Formulating a search problem
a)
- Variables: T,W,O,F,U,R
- Domains: The domain of all letters are a unique number in the range (0,9)
- Constraints: All letters must be distinct.