

Algorithm Design
M. T. Goodrich and R. Tamassia
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Solution of Exercise C-5.1

Anatjari should use a greedy algorithm. He should draw a line between every pair of watering holes that are within k miles of one another, for he can get from one to the other with one bottle of water. Anatjari should then use a path that uses the fewest number of lines and leads from his present position to a watering hole that is within with k miles of the other side. There can be no path with fewer stops, for he is including in his minimization all pairs of watering holes that can be reached with one bottle of water.