Assignment 3

1. (large) open areas, irregular paths (open areas with lots of isles or straight paths with inlets).
2. Formula for the amount of dropped pheromone:  
   Pheromone is dropped to mark routes that are frequently visited. Shorter routes get more pheromone added because Q is divided by a smaller length . Therefore, over time, high concentrations of pheromone will mark a short route from A to B. However, local optima are possible, so it is not always the shortest route that is marked.
3. Formula for the amount of pheromone on the path from ‘i’ to ‘j’. ‘k’ represents an ant, ‘m’ is the total amount of ants:  
    is the evaporation constant. With every iteration, a factor of the previous amount of pheromone is used in the following amount of pheromone. The evaporation constant is meant to introduce a certain amount of ‘forgetting’ in the algorithm. This will slowly undo pheromone on a route that turns out to be too long.