Homework 6: path counting

In class, I have presented two path counting algorithms: a. to count the number of paths from a node to another; b. to count the number of paths from one node to another while some regular constraint is placed on the paths to be counted.

1. Let γ be a regular ecpression. Design an algorithm to count the number of words in γ with length 10.
2. Sketch an approach to count the number of paths in the control flow diagram of a C-program.
3. Let G be a graph that may contain loops and hence, the number of paths from a designated start node to a designated end node may be infinite. Unfortunately, you usually cant say one infinite number is larger than another. Here is the problem: sketch a way to compare the number of paths in two graphs (that both may contain loops). (Hint: google perron, graph, path count).