```
set variable (total length) as 0
set variable (number of connections) as 0
for each (node1) in network
    for each (node2) in network
        if < (node1) != (node2) >
            set variable (path length) as (shortest distance between (node1) and (node2))
            set variable (total length) as ( (total length) + (path length) )
            set variable (number of connections) as ( (number of connections) + 1 )
print The average path length in the network is (total length) / (number of connections)
```