



```
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
  end
end
print The average path length in the network is total length / number of connections
```

The image shows a Scratch script designed to calculate the average path length in a network. It begins with two initialization blocks: 'set variable total length as 0' and 'set variable number of connections as 0'. A nested loop structure follows: an outer 'for each node1 in network' loop contains an inner 'for each node2 in network' loop. Inside the inner loop, an 'if node1 != node2' condition is checked. If true, three actions are performed: 'set variable path length as shortest distance between node1 and node2', 'set variable total length as total length + path length', and 'set variable number of connections as number of connections + 1'. The loops are closed with 'end' blocks. Finally, a 'print' block displays the result: 'The average path length in the network is total length / number of connections'.