You may have seen puzzles in which you are asked to trace an entire figure without backtracking or lifting your pencil from the paper. These figures are called Euler paths. Without actually trying to trace over an Euler path, can you tell whether or not it can be traced?

In a network, if the number of lines at a point is even then it is an even vertex, otherwise it is an odd vertex.

Odd vertex

Even vertex
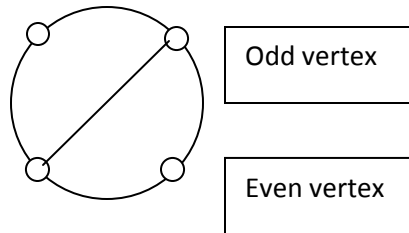
Trace each Euler path below to see whether it can be traced. Find the number of even and odd vertices. Record your findings in a table so that you can analyze your results.

1

2

3

4

6

5
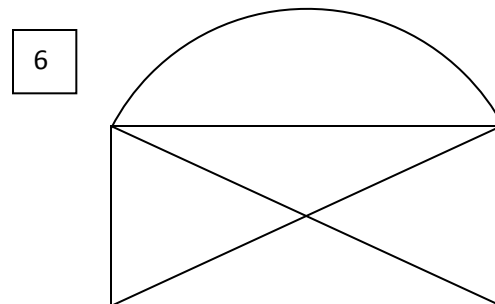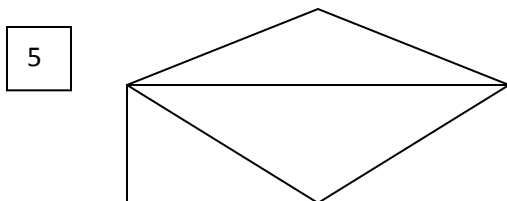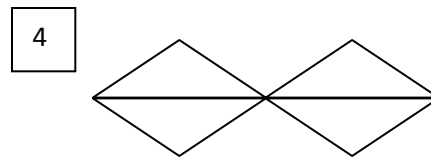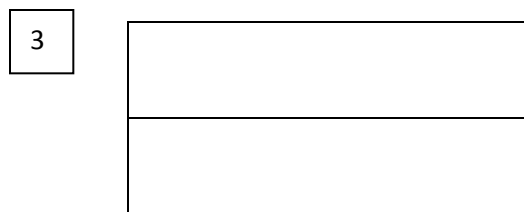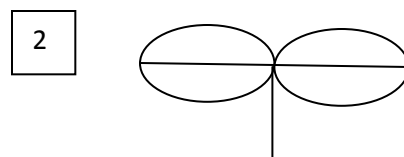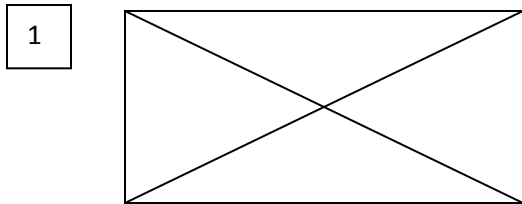
Make a display showing each network and how it can be traced. Include an explanation of how you can tell whether it can be traced by just examining the vertices.