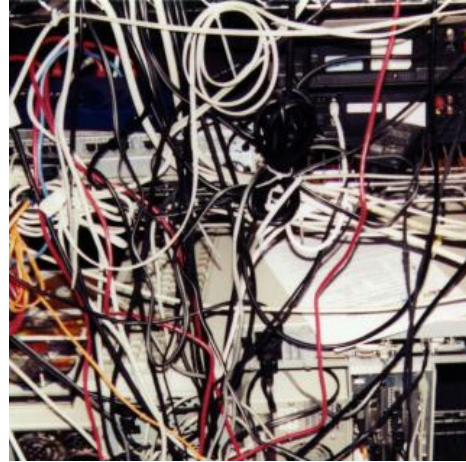
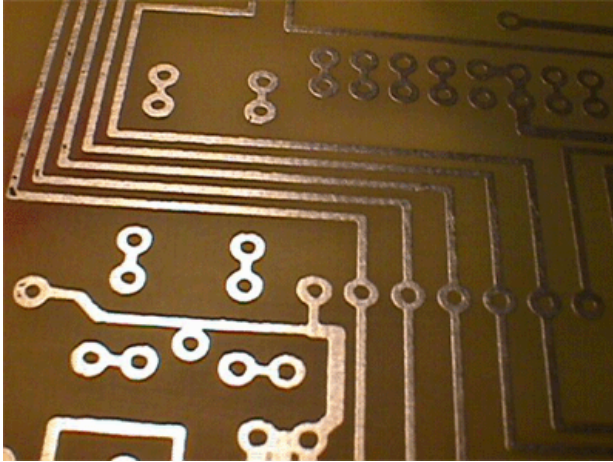


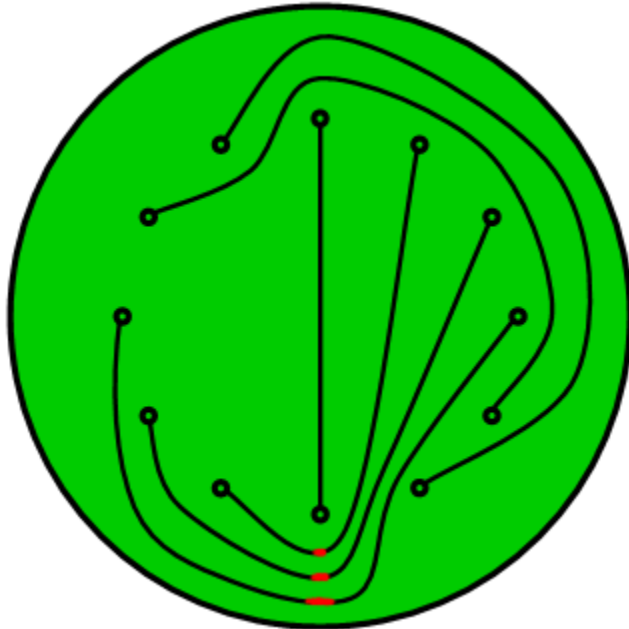
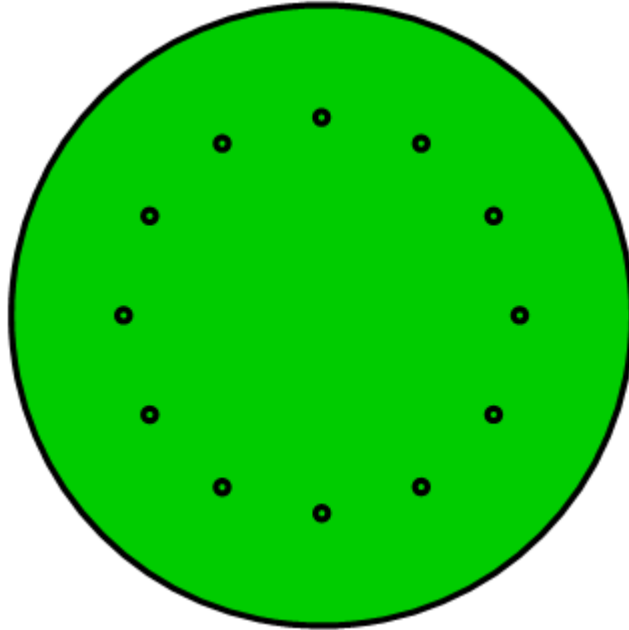
## Circuit Board Connect-the-dots

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Circuit boards are made by imprinting a conducting metal like copper on a non-conducting material like fiberglass. If it were not for circuit boards, connections could be made by wires, but this can get very messy!



Design a circuit board that connects opposite pairs of points on this circular disk. The problem is that no connectors may overlap and no more than two connectors may go "around the back" of the point.



The circuit board on the right successfully connects opposite points, but 3 connectors go around the back (red) of the lowest point so this circuit board will melt.

Extensions:

Circuit boards may be printed on both sides with the dots going through from one side of the board to the other. Create your own problem using two-sided printing.

**Credits:**

Theme, Problem and Extensions by Gord! © 2005 Galileo