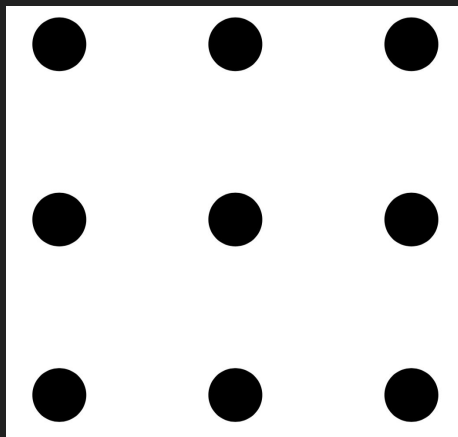# Problem #1

- Four brothers, Jon, Jimmy, Jake and Jacob, have jobs in the big city as a lawyer, a surgeon, a chef and a detective (not necessarily in that order). Jon shares a duplex with his brothers the surgeon and the lawyer. Jimmy goes to the same gym as his brothers the lawyer and the detective. The detective lives alone. Jacob envies his brother the lawyer. Which brother has which career?

# Problem #2

- Draw a continuous polygonal line that passes through each circle exactly once – and use the fewest number of line segments you can manage.
- A polygonal line is a series of connected line segments that are allowed to intersect. Try to solve the problem in 4 lines.

# Problem #3

- Indiana Jones and his party need to cross a flimsy rope bridge over a mile-deep gorge. It is so dark that it is impossible to cross the bridge without a flashlight. Furthermore, the bridge is so flimsy that it can only support the weight of two people at once. The party has a single flashlight, which has a weak beam, so that whenever two people cross the bridge they are constrained to walk together, at the speed of the slower person.
- Indiana Jones can cross the bridge in 5 minutes; his girlfriend can cross it in 10 minutes; his father needs 20 minutes and his father's sidekick needs 25 minutes to cross. Finally, they must all reach the other side within one hour.Is it possible for them to achieve this?