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by randomusername

1	Find all quadruples of positive integers (a, b, c, d) such that $a + b = cd$ and $c + d = ab$.
2	Is there a set of points in space whose intersection with any plane is a finite but nonempty set of points?
3	Any two members of a club with $3n + 1$ people plays ping-pong, tennis or chess with each other. Everyone has exactly n partners who plays ping-pong, n who play tennis and n who play chess. Prove that we can choose three members of the club who play three different games amongst each other.