

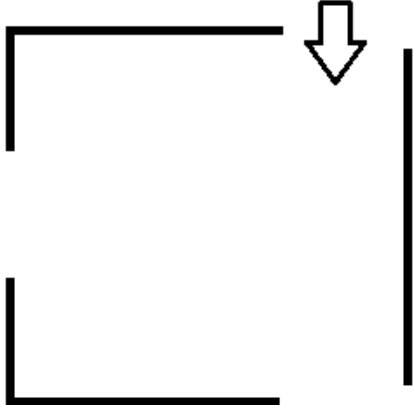
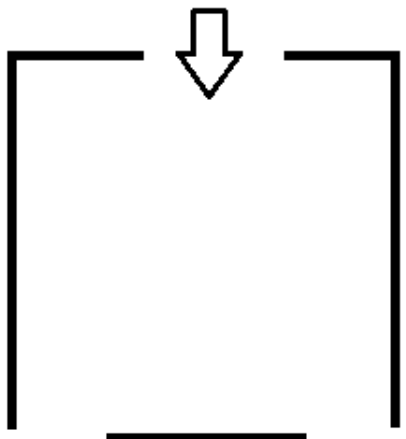
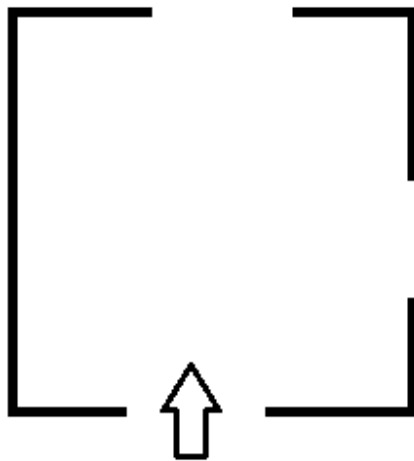
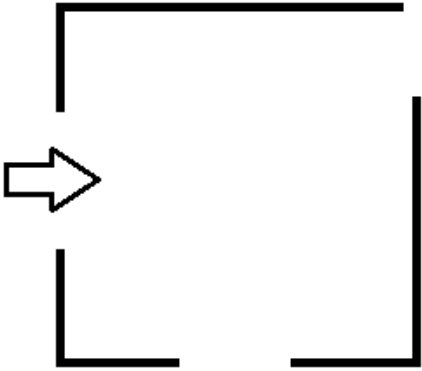
Find numerical solution of two-dimensional Navier-Stokes equation

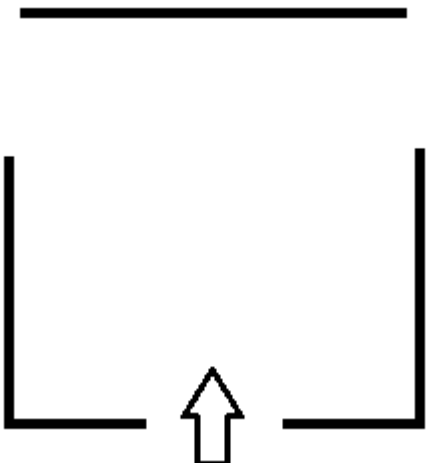
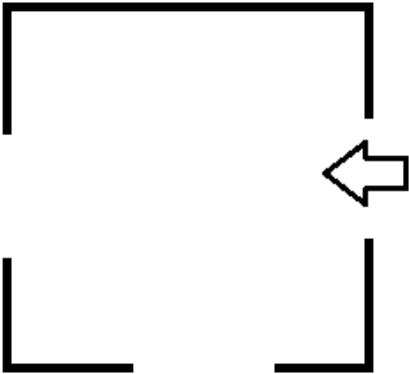
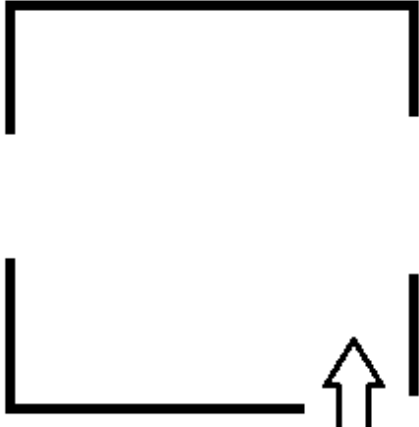
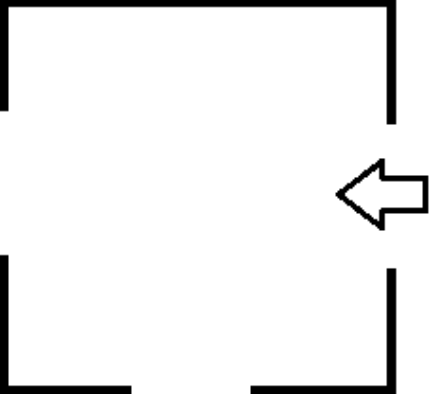
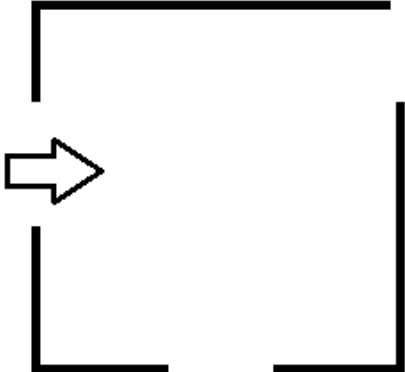
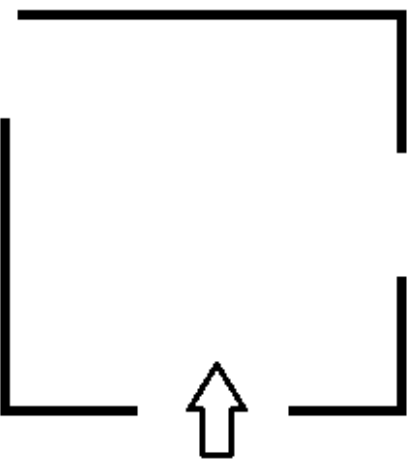
$$\frac{\partial U}{\partial t} + U \frac{\partial U}{\partial x} + V \frac{\partial U}{\partial y} = -\frac{1}{\rho} \frac{\partial P}{\partial x} + \frac{1}{\text{Re}} \left(\frac{\partial^2 U}{\partial x^2} + \frac{\partial^2 U}{\partial y^2} \right)$$

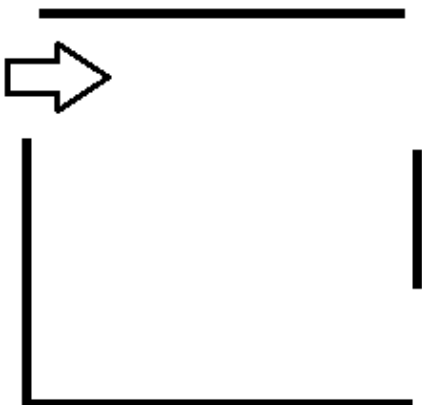
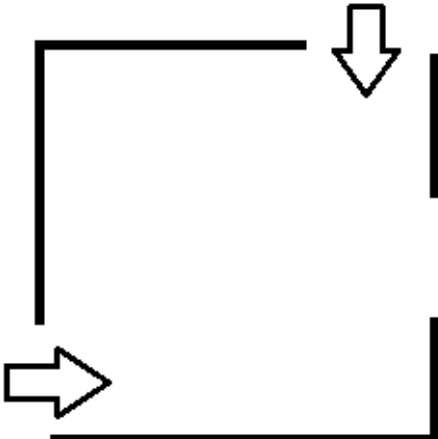
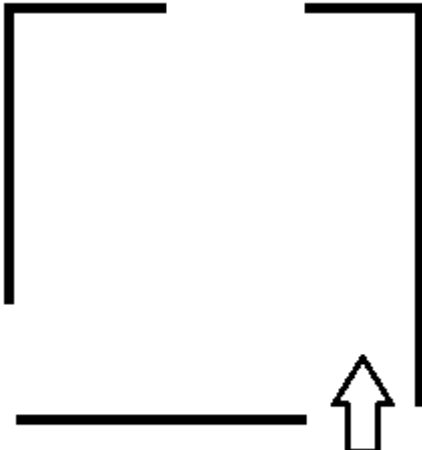
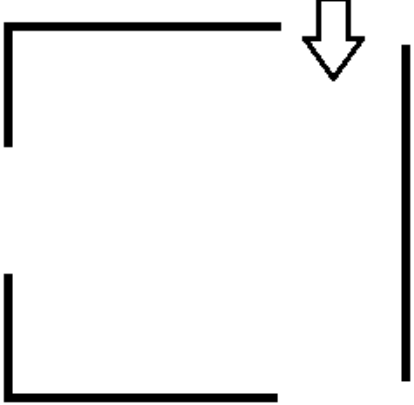
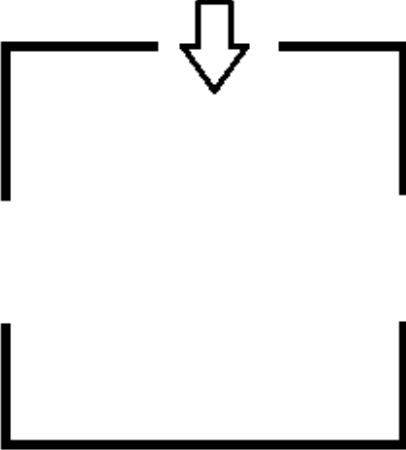
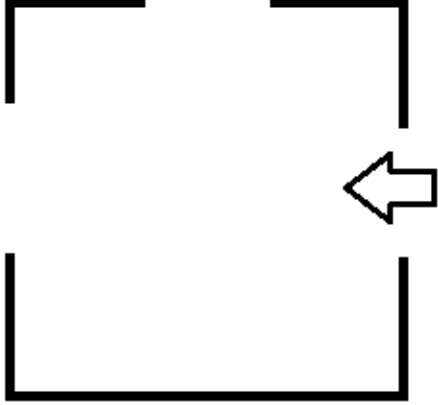
$$\frac{\partial V}{\partial t} + U \frac{\partial V}{\partial x} + V \frac{\partial V}{\partial y} = -\frac{1}{\rho} \frac{\partial P}{\partial y} + \frac{1}{\text{Re}} \left(\frac{\partial^2 V}{\partial x^2} + \frac{\partial^2 V}{\partial y^2} \right)$$

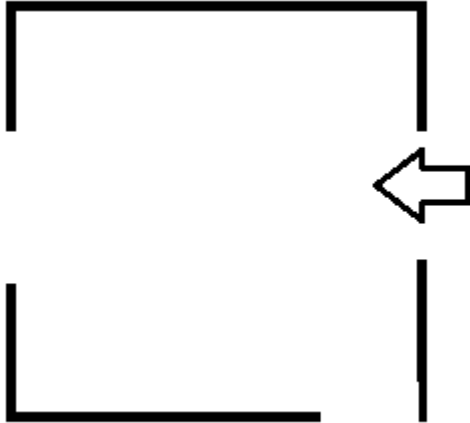
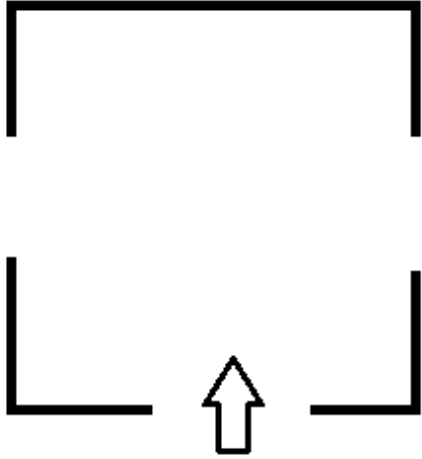
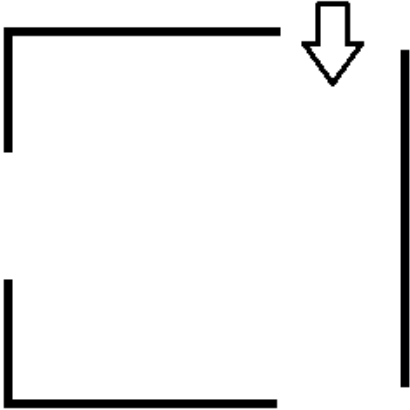
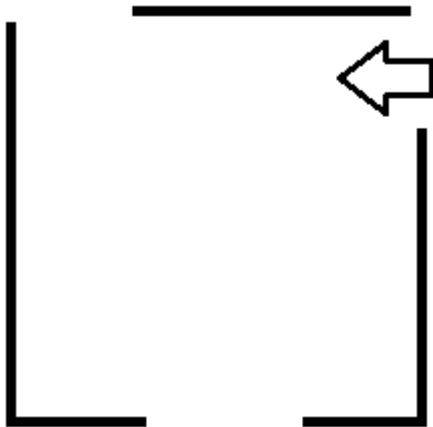
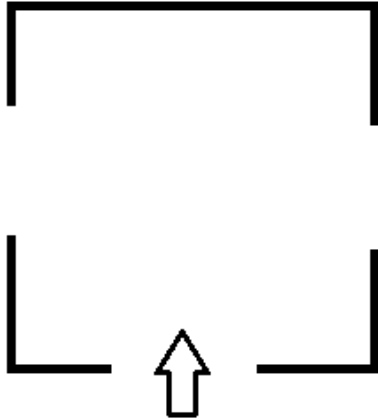
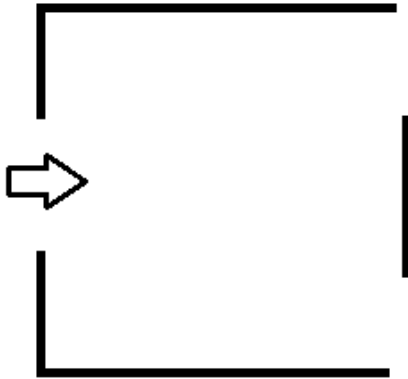
$$\frac{\partial U}{\partial x} + \frac{\partial V}{\partial y} = 0$$

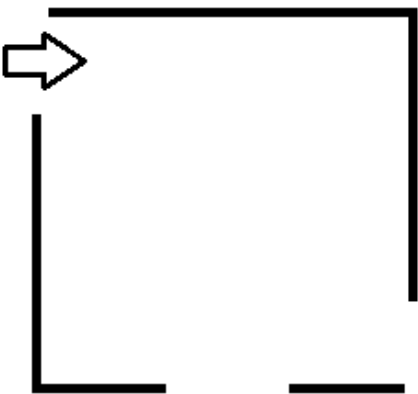
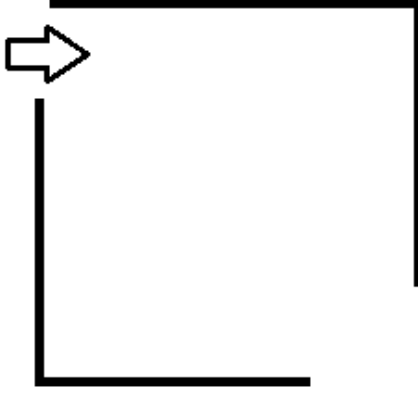
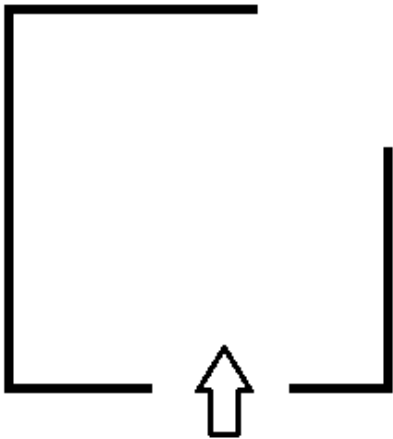
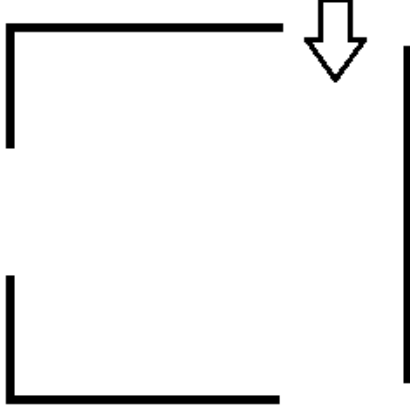
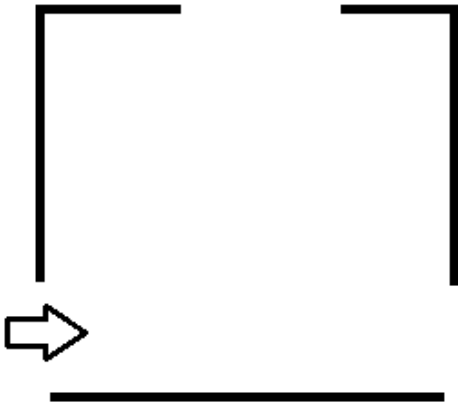
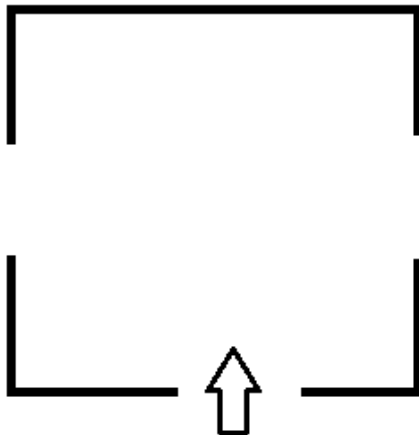
with the following boundary conditions:

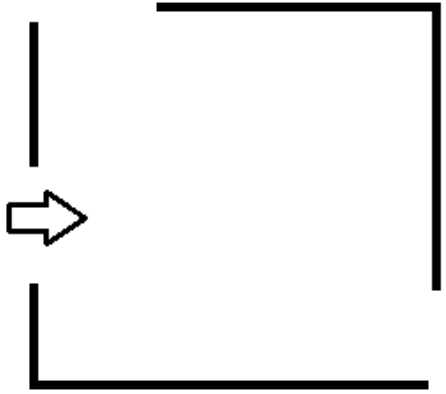
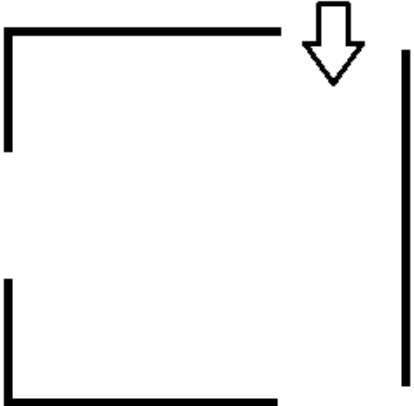
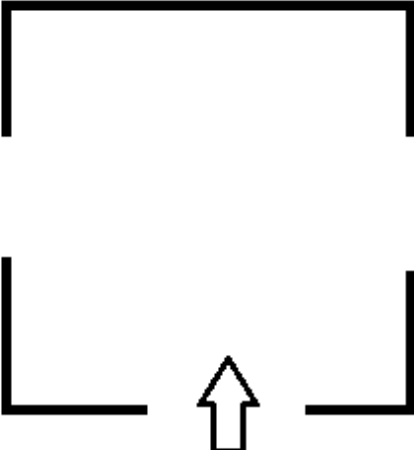
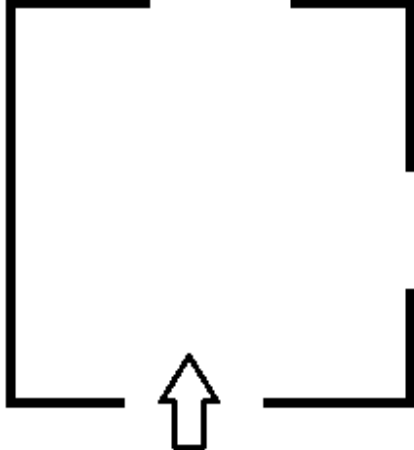
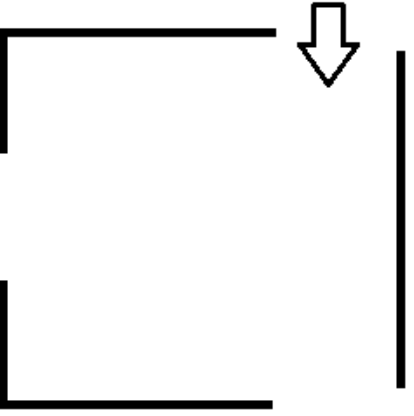
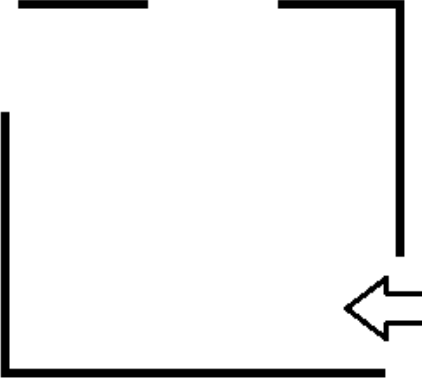
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Draw graphs of V, U and P for different time moments, at least 3 moments.