We have learned the notion of Configuration space (C-space). It is important to be able to tell the dimensionality of the corresponding C-space for a given robot. All joints are 1D joints. Please answer the questions below.

1) The robot is a point robot in a 2D work space. The corresponding C-space has ___2___ degrees of freedom.
2) The robot is a point robot in a 3D work space. The corresponding C-space has ___3___ degrees of freedom.
3) The robot is a line segment in a 2D work space. The corresponding C-space has ___3___ degrees of freedom.
4) The robot is a rectangle in a 3D work space. The corresponding C-space has ___6___ degrees of freedom.
5) The robot consists of two line segments that are connected by a revolute joint in a 2D work space. The corresponding C-space has ___4___ degrees of freedom.
6) The robot consists of two line segments that are connected by a revolute joint in a 3D work space. The corresponding C-space has ___7___ degrees of freedom.
7) The robot manipulator has its 0th link as a fixed base and consists of six line segments that are connected by revolute joints in a 3D work space. The corresponding C-space has ___6___ degrees of freedom.
8) The snake robot consists of N line segments that are inter-connected by N-1 revolute joints in a 3D work space. The corresponding C-space has ___6+N-1=N+5___ degrees of freedom.