The parameters that produce all negative values along the x1 axis are:

robot = {'joint\_masses': [0.25, 250],\

'link\_lengths': [0.2,0.2],\

'actuator\_limits': [(-10,10), (-10,10)]\

}

simulation\_parameters = { 'x1\_lim':[0, 1, 0.01],\

'x2\_lim': [0,20, 0.1],\

'line\_definition': ["straight line", [(0.34,-0.20),(0.34, 0.20)]],\

'initial\_state': (0,0),\

'final\_state': (1,11.5)\

}

target\_state = (0.75, 10.5)

Another set that achieves similar results

robot = {'joint\_masses': [0.25, 10],\

'link\_lengths': [0.2,0.2],\

'actuator\_limits': [(-10,10), (-10,10)]\

}

simulation\_parameters = { 'x1\_lim':[0, 1, 0.01],\

'x2\_lim': [0,20, 0.1],\

'line\_definition': ["straight line", [(0.34,-0.20),(0.34, 0.20)]],\

'initial\_state': (0,0),\

'final\_state': (1,11.5)\

}