**test task**

DH parameters table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Link No** | **Twist (α)** | **Link length (a)** | **Link offset (d)** | **Joint angle (θ)** |
| 0 | 0 | 0 | - | - |
| 1 | 0 | 0 | 0 | θ1 |
| 2 | π/2 | 10 | 0 | θ2 |
| 3 | 0 | 5 | 0 | θ3 |
| 4 | 0 | 5 | 0 | 0 |
|  |  |  |  |  |

Joints limits table

|  |  |  |
| --- | --- | --- |
| **Joint No** | **Min limit** | **Max limit** |
| 1 | -π | π |
| 2 | -π/2 | π/2 |
| 3 | -π | π |

Input

20.0 0.0 0.0 0.0

17.0 0.0 0.0 1.5

15.0 1.5 1.5 3.5

15.0 -1.5 1.5 5.0

15.0 -1.5 -1.5 7.0

15.0 1.5 -1.5 9.0

20.0 0.0 0.0 10.0

My Question:

1. if the robot arm starts on 20.0, 0.0, 0.0, which means that joint angle3 is 0, it is impossible to calculate the inverse Jacobian, because it is the singular point, so I doubt

that the situation is a bit incorrect.

2. I changed the DH parameters as above, because if that’s not, it is impossible to move the arm, x-y axis.