

Enter the joint offset s6 in inches: 6
 Enter the joint angle phi1 in degrees: 37
 Enter the joint angle theta2 in degrees: 85
 Enter the joint angle theta3 in degrees: -23
 Enter the joint angle theta4 in degrees: 71
 Enter the joint angle theta5 in degrees: 127
 Enter the joint angle theta6 in degrees: 101
 Enter the coordinates of the tool in the coordinate system 6(Enter the points within square brackets!!!) : [5 3 7]
 Enter the link length a12 in inches: 0
 Enter the link length a23 in inches: 44
 Enter the link length a34 in inches: 0
 Enter the link length a45 in inches: 0
 Enter the link length a56 in inches: 0
 Enter the twist angle alpha12 in degrees: 90
 Enter the twist angle alpha23 in degrees: 0
 Enter the twist angle alpha34 in degrees: 90
 Enter the twist angle alpha45 in degrees: 61
 Enter the twist angle alpha56 in degrees: 61
 Enter the joint offset s2 in inches: 0
 Enter the joint offset s3 in inches: 0
 Enter the joint offset s4 in inches: 55
 Enter the joint offset s5 in inches: 0
 The coordinates of the tool in the fixed coordinate system are:
 P_tool_F =
 54.7642
 32.8389
 23.8782

The values for S6 as seen in fixed coordinate system are:
 0.9999
 -0.0047
 0.0153

The values for a67 seen in fixed coordinate system are:
 -0.0076
 0.7011
 0.7130

The jacobian Matrix J =

0	0.6018	0.6018	0.7052	0.4806	0.9999
0	-0.7986	-0.7986	0.5314	0.7187	-0.0047
1.0000	0.0000	0.0000	-0.4695	0.5026	0.0153
0	0	35.0062	-24.3748	2.9031	0.5660
0	0	26.3791	32.3465	-12.3747	17.3702
0	0	-3.8349	0.0000	14.9199	-31.7252

Elements of 1st three rows of Jacobian matrix are dimensionless and last three rows have units of inches.

Enter the desired tool point velocity when observed from the fixed frame:(as row vector in square brackets): [2 4 -7]
 Enter the angular velocity of the last link when observed from fixed frame in deg/sec:(as row vector in square brackets): [8 0 0]
 Enter the desired angular acceleration of the tool point when observed from the fixed frame (as row vector in square brackets) in rad/sec^2:[2 0.5 0]
 Enter the desired linear acceleration of the Tool point when observed from the fixed

frame (as a row vector in square brackets) in in/sec²: [20 0 -10]

Angular velocities in rad/sec are:

0.0505
-0.1813
0.0477
-0.0221
-0.1302
0.2982

Angular velocities in deg/sec are:

2.8924
-10.3876
2.7338
-1.2665
-7.4576
17.0852

Angular accelerations in rad/sec² are:

-0.9003
0.3310
0.3177
-0.1694
1.5688
0.9795

Angular acceleration in deg/sec² are;

-51.5808
18.9649
18.2038
-9.7082
89.8848
56.1216

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