MRC_A_001_Solution

April 12, 2016

1 Direct Transform

```
In [ ]: [[  9.79605349e-01   2.00622117e-01   1.11412376e-02   1.26378963e+00]
         [ -2.00622117e-01   9.73519087e-01   1.09596317e-01  -3.19000000e-01]
         [  1.11412376e-02  -1.09596317e-01   9.93913739e-01   9.46772698e-04]
         [  0.00000000e+00   0.00000000e+00   0.00000000e+00   1.00000000e+00]]
```

2 Inverse Transform

```
In [ ]: [[  6.12323400e-17   0.00000000e+00  -1.00000000e+00   5.75891405e-03]
         [  0.00000000e+00   1.00000000e+00   0.00000000e+00  -6.00000000e-03]
         [  1.00000000e+00   0.00000000e+00   6.12323400e-17   3.58173001e-01]
         [  0.00000000e+00   0.00000000e+00   0.00000000e+00   1.00000000e+00]]
```

3 Direct Transform Sympy

```
In [ ]: array([[0.979605348592020, 0.200622117011937, 0.0111412376132973,
                1.26378962688298],
               [-0.200622117011937, 0.973519087391822, 0.109596316769510,
                -0.319000000000000],
               [0.0111412376132972, -0.109596316769510, 0.993913738799802,
                0.000946772698371512]], dtype=object), B, D
```

4 Inverse Transform Sympy

```
In [ ]: (array([[5.55111512312578e-17, 0, -1.00000000000000, 0.00575891404855539],
               [0, 1, 0, -0.00599999999999999],
               [1.00000000000000, 0, 5.55111512312578e-17, 0.358173001345448],
               [0, 0, 0, 1]], dtype=object), E, P)
```