```
>> Untitled
Warning: A non-empty cvx problem already exists in this scope.
   It is being overwritten.
> In cvxprob (line 28)
  In cvx_begin (line 41)
  In Untitled (line 5)

Calling SDPT3 4.0: 4 variables, 2 equality constraints
------------------------------------------------------------


 num. of constraints =  2
 dim. of linear var  =  4
 4 linear variables from unrestricted variable.
 *** convert ublk to lblk
*****************************************************************
   SDPT3: Infeasible path-following algorithms
*****************************************************************
 version  predcorr  gam  expon  scale_data
    NT      1      0.000  1        0
it pstep dstep pinfeas dinfeas  gap      prim-obj      dual-obj    cputime
-------------------------------------------------------------------
 0|0.000|0.000|8.8e-01|9.7e+00|1.9e+02| 0.000000e+00  0.000000e+00| 0:0:00| chol  1  1
 1|1.000|0.977|6.7e-09|3.2e-01|2.4e+00| 0.000000e+00  2.456547e-01| 0:0:01| chol  1  1
 2|1.000|1.000|2.6e-08|1.0e-02|2.1e-02| 0.000000e+00  3.513169e-02| 0:0:01| chol  1  1
 3|1.000|0.995|6.0e-08|1.0e-03|2.5e-04| 0.000000e+00  5.049337e-03| 0:0:01| chol  1  1
 4|1.000|0.990|9.0e-09|9.2e-05|6.3e-05| 0.000000e+00  5.452689e-04| 0:0:01| chol  1  1
 5|1.000|0.989|6.0e-11|1.1e-05|1.6e-05| 0.000000e+00  5.987542e-06| 0:0:01| chol  1  1
 6|1.000|0.989|3.3e-13|2.8e-06|3.9e-06| 0.000000e+00  6.578650e-08| 0:0:01| chol  1  1
 7|1.000|0.988|2.3e-15|7.1e-07|9.9e-07| 0.000000e+00 -1.635489e-08| 0:0:01| chol  1  1
 8|1.000|0.988|2.5e-16|1.8e-07|2.5e-07| 0.000000e+00 -4.512658e-09| 0:0:01| chol  1  1
 9|1.000|0.988|1.1e-16|4.5e-08|6.2e-08| 0.000000e+00 -1.134749e-09| 0:0:01| chol  1  1
10|1.000|0.988|0.0e+00|1.1e-08|1.5e-08| 0.000000e+00 -2.841549e-10| 0:0:01| chol  1  1
11|1.000|0.988|2.5e-16|2.8e-09|3.9e-09| 0.000000e+00 -7.115650e-11| 0:0:01|
  stop: max(relative gap, infeasibilities) < 1.49e-08
-------------------------------------------------------------------
 number of iterations   = 11
 primal objective value =  0.00000000e+00
 dual   objective value = -7.11565045e-11
 gap := trace(XZ)       = 3.89e-09
 relative gap           = 3.89e-09
```

```
 actual relative gap    = 7.12e-11
 rel. primal infeas (scaled problem)   = 2.46e-16
 rel. dual     "        "       "      = 2.80e-09
 rel. primal infeas (unscaled problem) = 0.00e+00
 rel. dual     "        "       "      = 0.00e+00
 norm(X), norm(y), norm(Z) = 7.1e+00, 1.0e-11, 2.0e-09
 norm(A), norm(b), norm(C) = 3.0e+00, 8.1e+00, 1.0e+00
 Total CPU time (secs)  = 1.05
 CPU time per iteration = 0.10
 termination code       =  0
 DIMACS: 3.3e-16  0.0e+00  2.8e-09  0.0e+00  7.1e-11  3.9e-09
------------------------------------------------------------------

------------------------------------------------------------
Status: Solved
Optimal value (cvx_optval): +0


Calling SDPT3 4.0: 4 variables, 2 equality constraints
------------------------------------------------------------

 num. of constraints =  2
 dim. of linear var  =  4
 4 linear variables from unrestricted variable.
 *** convert ublk to lblk
*****************************************************************
   SDPT3: Infeasible path-following algorithms
*****************************************************************
 version  predcorr  gam  expon  scale_data
    NT      1      0.000   1        0
it pstep dstep pinfeas dinfeas  gap      prim-obj      dual-obj    cputime
-----------------------------------------------------------------
 0|0.000|0.000|8.8e-01|9.7e+00|1.9e+02| 0.000000e+00  0.000000e+00| 0:0:00| chol  1  1
 1|1.000|0.977|6.7e-09|3.2e-01|2.4e+00| 0.000000e+00  2.456547e-01| 0:0:00| chol  1  1
 2|1.000|1.000|2.6e-08|1.0e-02|2.1e-02| 0.000000e+00  3.513169e-02| 0:0:00| chol  1  1
 3|1.000|0.995|6.0e-08|1.0e-03|2.5e-04| 0.000000e+00  5.049337e-03| 0:0:00| chol  1  1
 4|1.000|0.990|9.0e-09|9.2e-05|6.3e-05| 0.000000e+00  5.452689e-04| 0:0:00| chol  1  1
 5|1.000|0.989|6.0e-11|1.1e-05|1.6e-05| 0.000000e+00  5.987542e-06| 0:0:00| chol  1  1
 6|1.000|0.989|3.3e-13|2.8e-06|3.9e-06| 0.000000e+00  6.578650e-08| 0:0:00| chol  1  1
 7|1.000|0.988|2.3e-15|7.1e-07|9.9e-07| 0.000000e+00 -1.635489e-08| 0:0:00| chol  1  1
```

```
 8|1.000|0.988|2.5e-16|1.8e-07|2.5e-07| 0.000000e+00 -4.512658e-09| 0:0:00| chol  1  1
 9|1.000|0.988|1.1e-16|4.5e-08|6.2e-08| 0.000000e+00 -1.134749e-09| 0:0:00| chol  1  1
10|1.000|0.988|0.0e+00|1.1e-08|1.5e-08| 0.000000e+00 -2.841549e-10| 0:0:00| chol  1  1
11|1.000|0.988|2.5e-16|2.8e-09|3.9e-09| 0.000000e+00 -7.115650e-11| 0:0:00|
  stop: max(relative gap, infeasibilities) < 1.49e-08
------------------------------------------------------------------
 number of iterations   = 11
 primal objective value =  0.00000000e+00
 dual   objective value = -7.11565045e-11
 gap := trace(XZ)       = 3.89e-09
 relative gap           = 3.89e-09
 actual relative gap    = 7.12e-11
 rel. primal infeas (scaled problem)   = 2.46e-16
 rel. dual     "        "       "      = 2.80e-09
 rel. primal infeas (unscaled problem) = 0.00e+00
 rel. dual     "        "       "      = 0.00e+00
 norm(X), norm(y), norm(Z) = 7.1e+00, 1.0e-11, 2.0e-09
 norm(A), norm(b), norm(C) = 3.0e+00, 8.1e+00, 1.0e+00
 Total CPU time (secs)  = 0.23
 CPU time per iteration = 0.02
 termination code       =  0
 DIMACS: 3.3e-16  0.0e+00  2.8e-09  0.0e+00  7.1e-11  3.9e-09
------------------------------------------------------------------

------------------------------------------------------------
Status: Solved
Optimal value (cvx_optval): +0

>> Untitled

Calling SDPT3 4.0: 4 variables, 2 equality constraints
------------------------------------------------------------

 num. of constraints =  2
 dim. of linear var  =  4
 4 linear variables from unrestricted variable.
 *** convert ublk to lblk
******************************************************************
   SDPT3: Infeasible path-following algorithms
******************************************************************
```

```
 version  predcorr  gam  expon  scale_data
    NT      1      0.000   1        0
it pstep dstep pinfeas dinfeas  gap      prim-obj      dual-obj    cputime
-------------------------------------------------------------------
 0|0.000|0.000|8.8e-01|9.7e+00|1.9e+02| 0.000000e+00  0.000000e+00| 0:0:00| chol  1  1
 1|1.000|0.977|6.7e-09|3.2e-01|2.4e+00| 0.000000e+00  2.456547e-01| 0:0:00| chol  1  1
 2|1.000|1.000|2.6e-08|1.0e-02|2.1e-02| 0.000000e+00  3.513169e-02| 0:0:00| chol  1  1
 3|1.000|0.995|6.0e-08|1.0e-03|2.5e-04| 0.000000e+00  5.049337e-03| 0:0:00| chol  1  1
 4|1.000|0.990|9.0e-09|9.2e-05|6.3e-05| 0.000000e+00  5.452689e-04| 0:0:00| chol  1  1
 5|1.000|0.989|6.0e-11|1.1e-05|1.6e-05| 0.000000e+00  5.987542e-06| 0:0:00| chol  1  1
 6|1.000|0.989|3.3e-13|2.8e-06|3.9e-06| 0.000000e+00  6.578650e-08| 0:0:00| chol  1  1
 7|1.000|0.988|2.3e-15|7.1e-07|9.9e-07| 0.000000e+00 -1.635489e-08| 0:0:00| chol  1  1
 8|1.000|0.988|2.5e-16|1.8e-07|2.5e-07| 0.000000e+00 -4.512658e-09| 0:0:00| chol  1  1
 9|1.000|0.988|1.1e-16|4.5e-08|6.2e-08| 0.000000e+00 -1.134749e-09| 0:0:00| chol  1  1
10|1.000|0.988|0.0e+00|1.1e-08|1.5e-08| 0.000000e+00 -2.841549e-10| 0:0:00| chol  1  1
11|1.000|0.988|2.5e-16|2.8e-09|3.9e-09| 0.000000e+00 -7.115650e-11| 0:0:00|
  stop: max(relative gap, infeasibilities) < 1.49e-08
-------------------------------------------------------------------
 number of iterations   = 11
 primal objective value =  0.00000000e+00
 dual   objective value = -7.11565045e-11
 gap := trace(XZ)       = 3.89e-09
 relative gap           = 3.89e-09
 actual relative gap    = 7.12e-11
 rel. primal infeas (scaled problem)   = 2.46e-16
 rel. dual     "        "       "      = 2.80e-09
 rel. primal infeas (unscaled problem) = 0.00e+00
 rel. dual     "        "       "      = 0.00e+00
 norm(X), norm(y), norm(Z) = 7.1e+00, 1.0e-11, 2.0e-09
 norm(A), norm(b), norm(C) = 3.0e+00, 8.1e+00, 1.0e+00
 Total CPU time (secs)  = 0.45
 CPU time per iteration = 0.04
 termination code       =  0
 DIMACS: 3.3e-16  0.0e+00  2.8e-09  0.0e+00  7.1e-11  3.9e-09
-------------------------------------------------------------------


------------------------------------------------------------
Status: Solved
Optimal value (cvx_optval): +0
```

```
Calling SDPT3 4.0: 4 variables, 2 equality constraints
------------------------------------------------------------

 num. of constraints =  2
 dim. of linear var  =  4
 4 linear variables from unrestricted variable.
 *** convert ublk to lblk
******************************************************************
   SDPT3: Infeasible path-following algorithms
******************************************************************
 version  predcorr  gam  expon  scale_data
    NT      1      0.000   1        0
it pstep dstep pinfeas dinfeas  gap      prim-obj      dual-obj    cputime
-------------------------------------------------------------------
 0|0.000|0.000|8.8e-01|9.7e+00|1.9e+02| 0.000000e+00  0.000000e+00| 0:0:00| chol  1  1
 1|1.000|0.977|6.7e-09|3.2e-01|2.4e+00| 0.000000e+00  2.456547e-01| 0:0:00| chol  1  1
 2|1.000|1.000|2.6e-08|1.0e-02|2.1e-02| 0.000000e+00  3.513169e-02| 0:0:00| chol  1  1
 3|1.000|0.995|6.0e-08|1.0e-03|2.5e-04| 0.000000e+00  5.049337e-03| 0:0:00| chol  1  1
 4|1.000|0.990|9.0e-09|9.2e-05|6.3e-05| 0.000000e+00  5.452689e-04| 0:0:00| chol  1  1
 5|1.000|0.989|6.0e-11|1.1e-05|1.6e-05| 0.000000e+00  5.987542e-06| 0:0:00| chol  1  1
 6|1.000|0.989|3.3e-13|2.8e-06|3.9e-06| 0.000000e+00  6.578650e-08| 0:0:00| chol  1  1
 7|1.000|0.988|2.3e-15|7.1e-07|9.9e-07| 0.000000e+00 -1.635489e-08| 0:0:00| chol  1  1
 8|1.000|0.988|2.5e-16|1.8e-07|2.5e-07| 0.000000e+00 -4.512658e-09| 0:0:00| chol  1  1
 9|1.000|0.988|1.1e-16|4.5e-08|6.2e-08| 0.000000e+00 -1.134749e-09| 0:0:00| chol  1  1
10|1.000|0.988|0.0e+00|1.1e-08|1.5e-08| 0.000000e+00 -2.841549e-10| 0:0:00| chol  1  1
11|1.000|0.988|2.5e-16|2.8e-09|3.9e-09| 0.000000e+00 -7.115650e-11| 0:0:00|
  stop: max(relative gap, infeasibilities) < 1.49e-08
-------------------------------------------------------------------
 number of iterations   = 11
 primal objective value =  0.00000000e+00
 dual   objective value = -7.11565045e-11
 gap := trace(XZ)       = 3.89e-09
 relative gap           = 3.89e-09
 actual relative gap    = 7.12e-11
 rel. primal infeas (scaled problem)   = 2.46e-16
 rel. dual     "        "       "      = 2.80e-09
 rel. primal infeas (unscaled problem) = 0.00e+00
 rel. dual     "        "       "      = 0.00e+00
 norm(X), norm(y), norm(Z) = 7.1e+00, 1.0e-11, 2.0e-09
```

```
 norm(A), norm(b), norm(C) = 3.0e+00, 8.1e+00, 1.0e+00
 Total CPU time (secs)  = 0.36
 CPU time per iteration = 0.03
 termination code       =  0
 DIMACS: 3.3e-16  0.0e+00  2.8e-09  0.0e+00  7.1e-11  3.9e-09
------------------------------------------------------------------

------------------------------------------------------------
Status: Solved
Optimal value (cvx_optval): +0

>>
```