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>> % Example 5.8
>> % generate the problem data
>> prob=Ex_5_8;
>> RPMIOsolve_primal(prob,3);
the primal optimal value f^primal_k at order k=3 is 0.35727
the rank condition is satisfied at t=2 with rank being 4
we get LOWER bound of f*: 0.35727
the minimizer S^(k,*) admits a representing measure
there are 4 atoms in the extracted measure:
the 1-th atom is:
   -1.0000
   -0.0000

with the 1-th weight being
    0.1220    0.1409
    0.1409    0.1627

the 2-th atom is:
    1.0000
    0.0000

with the 2-th weight being
    0.1220   -0.1409
   -0.1409    0.1627

the 3-th atom is:
    0.0000
    1.0000

with the 3-th weight being
    0.1220    0.1409
    0.1409    0.1627

the 4-th atom is:
   -0.0000
   -1.0000

with the 4-th weight being
    0.1220   -0.1409
   -0.1409    0.1627

>> RPMIOsolve_dual(prob,3);

xx =

   -0.5774    0.5774


rho =

    0.3573

the primal dual value f^dual_k at order k=3 is 0.35727

ans =

    0.0000
    0.0000
    1.6667

the rank of the moment matrix M_{dy/2} is 1, so we get UPPER bound of f*: 0.35727
>>
```