

```
>> % Example 5.6
>> prob=Ex_5_6;
>> % compute f^primal_3
>> RPMIOsolve_primal(prob,3);
the primal optimal value f^primal_k at order k=3 is 0.4504
the rank condition is satisfied at t=1 with rank being 2
the minimizer S^(k,*) admits a representing measure
there are 2 atoms in the extracted measure:
the 1-th atom is:
```

```
0.8402
0.5423
```

with the 1-th weight being

```
0.2107    -0.2107
-0.2107     0.2107
```

the 2-th atom is:

```
-0.8402
-0.5423
```

with the 2-th weight being

```
0.2107     0.2107
0.2107     0.2107
```

```
>> % compute f^dual_3
>> RPMIOsolve_dual(prob,3);
```

xx =

```
0.2711    0.4201
```

rho =

```
0.4504
```

```
the primal dual value f^dual_k at order k=3 is 0.4504
the rank condition is satisfied at t=3 with rank being 1
the minimizer s^(k,*) admits a representing measure
there are 1 atoms in the extracted measure:
the 1-th atom is:
```

```
0.2711
0.4201
```

with the 1-th weight being  
1.0000

```
>> % as we can see the flat extension condition (43) holds  
>> % for both  $S^{(3,*)}$  and  $s^{(s,*)}$ , the global optimality  
>> % is numerically certified.  
>> % the optimal value is 0.4504 and the global minimizer is  
>> % (0.2711, 0.4201)  
>>
```