```
$Title Newsvendor_2

Set S /s1*s5/

Positive Variable
x
m(s)
MM(s)
;
*x.fx=50;

Binary Variable u(s);

Parameter
d(s)
/
s1        0
s2        30
s3        50
s4        70
s5        100
/

prob(s)
;

prob(s)=1/5;

Scalar bM ;
bM=smax(s,d(s));

Free Variable z;

Equations
obj
cons1
cons2
cons3
cons4
cons5
;

obj(s)..        z =l= -7*x + 10*m(s)+2*MM(s);

cons1(s)..      m(s)=l=x;
cons2(s)..      m(s)=l=d(s);
cons3(s)..      MM(s)=g=x-d(s);
cons4(s)..      MM(s)=l=x-d(s) + (1-u(s))*bM;
cons5(s)..      MM(s)=l=u(s)*bM;



Model Test1
/
obj
cons1
cons2
cons3
cons4
cons5
```

```
/
;

Options
MIP = CPLEX
OPTCR=0
RESLIM=120
;

Solve Test1 US MIP MAX Z


Display
"input"
Prob
bM
;

Display
"Output"
x.l
u.l
m.l
MM.l
Z.l
;


Parameter
R(s);
R(s) = -7*x.l + 10*m.l(s)+2*MM.l(s);

Display R;
```