

! Keywords: Academia / Auctions / Demand Backlog / Dual Prices / Economic / Equilibrium / Marketing;

MAX 9 X11 + 2 X12 + 8 X13 + 6 X14 + 3 X15 + 6 X21 + 7 X22 + 9 X23
+ X24 + 5 X25 + 7 X31 + 8 X32 + 6 X33 + 3 X34 + 4 X35 + 5 X41
+ 4 X42 + 3 X43 + 2 X44 + X45 ! (Maximize broker revenues)

SUBJECT TO

- 2) X11 + X21 + X31 + X41 <= 1 ! (Units of object 1 available)
- 3) X12 + X22 + X32 + X42 <= 2 ! .
- 4) X13 + X23 + X33 + X43 <= 3 ! .
- 5) X14 + X24 + X34 + X44 <= 3 ! .
- 6) X15 + X25 + X35 + X45 <= 4 ! (Units of object 5 available)
- 7) X11 + X12 + X13 + X14 + X15 <= 3 ! (Upper limit on buyer 1 demand)
- 8) X21 + X22 + X23 + X24 + X25 <= 3 ! .
- 9) X31 + X32 + X33 + X34 + X35 <= 3 ! .
- 10) X41 + X42 + X43 + X44 + X45 <= 3 ! (Upper limit on buyer 2 demand)
- 11) X11 <= 1
- 12) X21 <= 1
- 13) X31 <= 1
- 14) X41 <= 1
- 15) X12 <= 1
- 16) X22 <= 1
- 17) X32 <= 1
- 18) X42 <= 1
- 19) X13 <= 1
- 20) X23 <= 1
- 21) X33 <= 1
- 22) X43 <= 1
- 23) X14 <= 1
- 24) X24 <= 1
- 25) X34 <= 1
- 26) X44 <= 1
- 27) X15 <= 1
- 28) X25 <= 1
- 29) X35 <= 1
- 30) X45 <= 1

END