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! Example 2 from section 11.4 (page 483);
! A binary programming example from your friendly LINGO expert, John
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!Objective Function;

Max = y11 + 3*y12 + 3*y13 + 2*y22 + 3*y23 - y31 + 2*y32 + 4*y33;

! subject to...;

y11 + y12 + y13 <= 1;
y21 + y22 + y23 <= 1;
y31 + y32 + y33 <= 1;

y11 + 2*y12 + 3*y13 + y21 + 2*y22 + 3*y23 + y31 + 2*y32 + 3*y33 = 5;

! The function @BIN() defines variables to be binary.
  This function can also be embedded within a @FOR() function in order to
  define binary variables over sets.
  @GIN() defines variables to be integers.
  When using LINGO format, one inserts these expressions after the "END"
  statement.;

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```

@BIN(y11);
@BIN(y12);
@BIN(y13);
@BIN(y21);
@BIN(y22);
@BIN(y23);
@BIN(y31);
@BIN(y32);
@BIN(y33);

```

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!solution screen:
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Global optimal solution found.
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Objective value:                7.000000
Objective bound:                7.000000
Infeasibilities:                0.000000
Extended solver steps:          0
Total solver iterations:        0

```

Variable	Value	Reduced Cost
Y11	0.000000	-1.000000
Y12	1.000000	-3.000000
Y13	0.000000	-3.000000
Y22	0.000000	-2.000000
Y23	0.000000	-3.000000
Y31	0.000000	1.000000
Y32	0.000000	-2.000000
Y33	1.000000	-4.000000
Y21	0.000000	0.000000

Row	Slack or Surplus	Dual Price
1	7.000000	1.000000

2	0.000000	0.000000
3	1.000000	0.000000
4	0.000000	0.000000
5	0.000000	0.000000