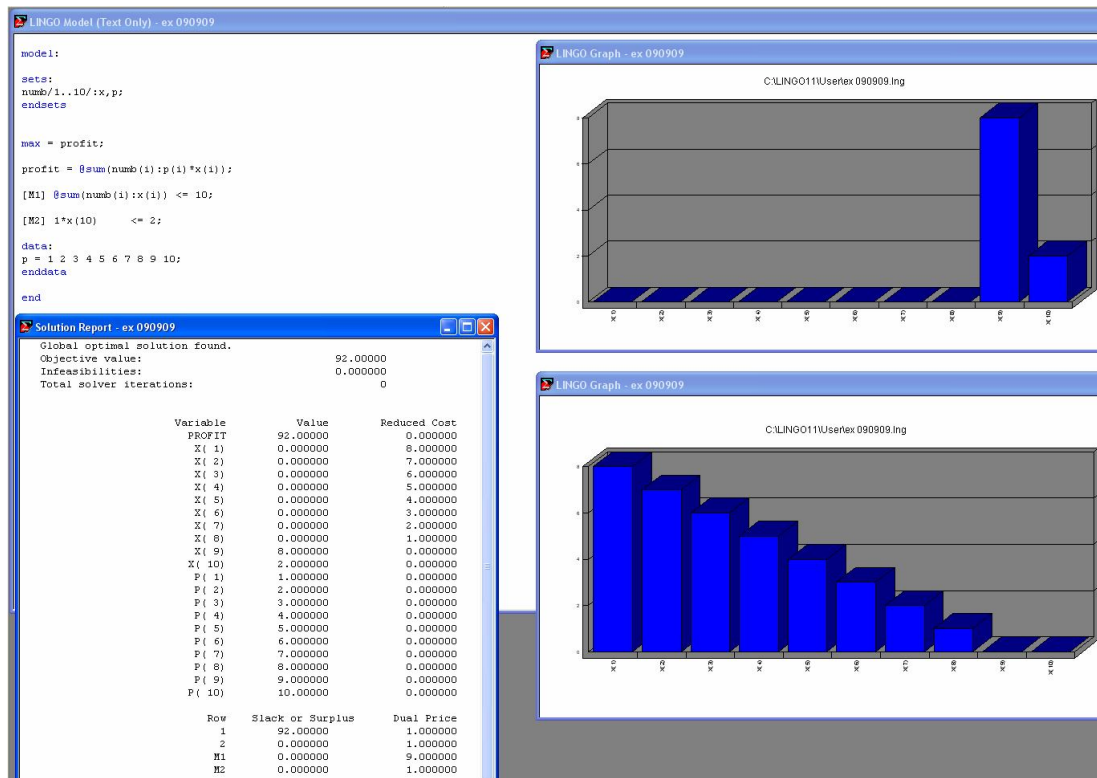
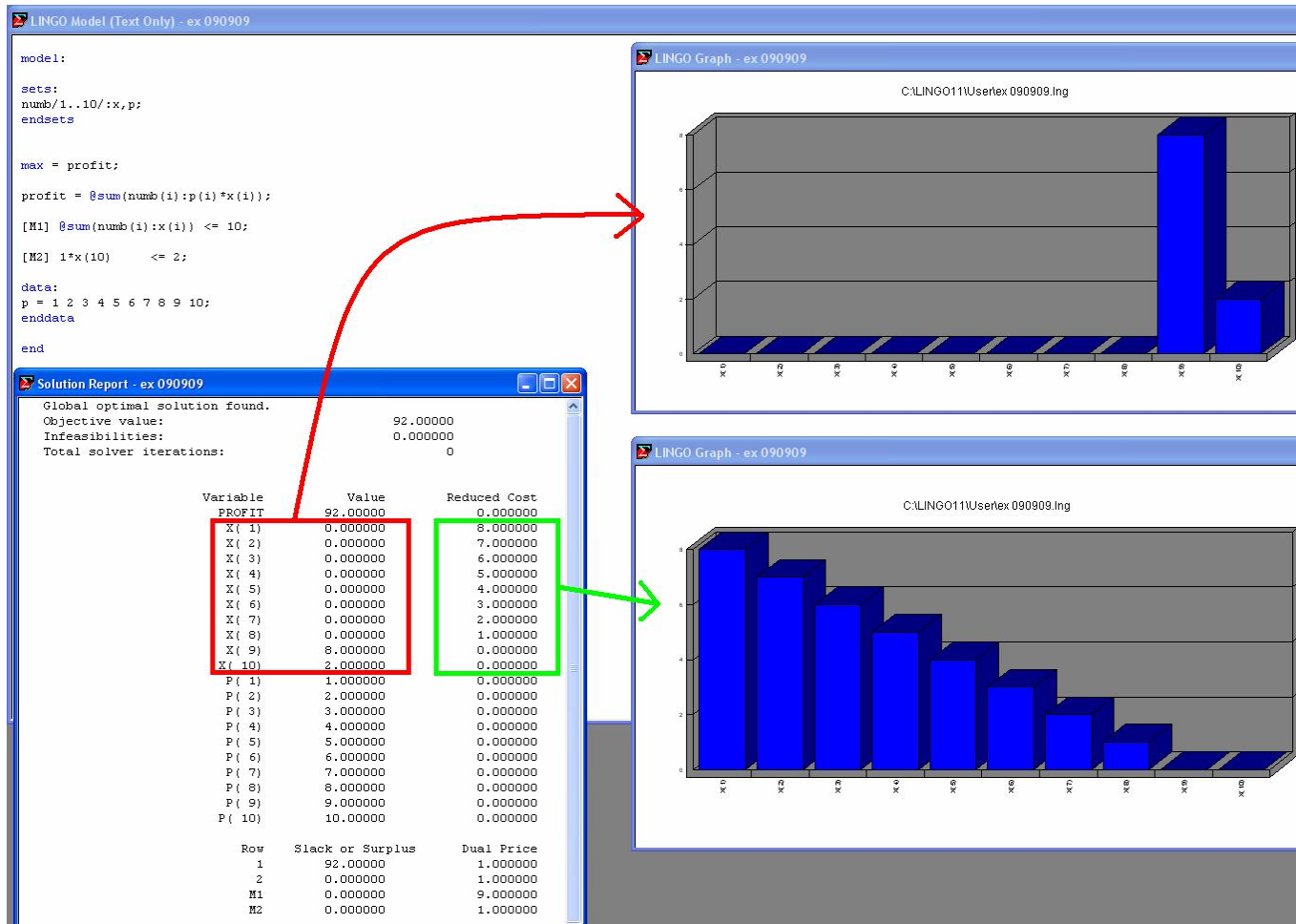


L2b

## Special information on result reports and options

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```

LINGO Model [Text Only] - ex_090909_1108
model:
sets:
  numb/1..10/:x,p;
endsets

max = profit;

profit = @sum(numb(i):p(i)*x(i));

[M1] @sum(numb(i):x(i)) <= 10;

[M2] 1*x(10) <= 2;

data:
  p = 1 2 3 4 5 6 7 8 9 10;
enddata

end

```

Range Report - ex\_090909\_1108

Ranges in which the basis is unchanged:

Variable	Objective Coefficient Ranges		
	Current Coefficient	Allowable Increase	Allowable Decrease
PROFIT	1.000000	INFINITY	1.000000
X( 1)	0.0	8.000000	INFINITY
X( 2)	0.0	7.000000	INFINITY
X( 3)	0.0	6.000000	INFINITY
X( 4)	0.0	5.000000	INFINITY
X( 5)	0.0	4.000000	INFINITY
X( 6)	0.0	3.000000	INFINITY
X( 7)	0.0	2.000000	INFINITY
X( 8)	0.0	1.000000	INFINITY
X( 9)	0.0	1.000000	1.000000
X( 10)	0.0	INFINITY	1.000000

Row	Righthand Side Ranges		
	Current RHS	Allowable Increase	Allowable Decrease
2	0.0	INFINITY	92.000000
M1	10.000000	INFINITY	8.000000
M2	2.000000	8.000000	2.000000

LINGO 11 Online Users Manual

122. RANGE REPORTS NOT POSSIBLE WHEN RANGE ANALYSIS IS DISABLED.

Range computations are currently disabled. To enable range computations in Windows versions of LINGO run the [LINGO/Options](#) command, click the [General Solver](#) tab, and select the [Prices and Ranges](#) option from the [Dual Computations](#) list box. To enable range computations in command-line versions of LINGO use the command: [SET DUALCO 2](#). Be aware that range computations will increase solution times.

Solution Report - ex\_090909\_1108

Global optimal solution found.

Objective value: 92.000000

Infeasibilities: 0.000000

Total solver iterations: 0

Variable	Value	Reduced Cost
PROFIT	92.000000	0.000000
X( 1)	0.000000	8.000000
X( 2)	0.000000	7.000000
X( 3)	0.000000	6.000000
X( 4)	0.000000	5.000000
X( 5)	0.000000	4.000000
X( 6)	0.000000	3.000000
X( 7)	0.000000	2.000000
X( 8)	0.000000	1.000000
X( 9)	8.000000	0.000000
X( 10)	2.000000	0.000000
P( 1)	1.000000	0.000000
P( 2)	2.000000	0.000000
P( 3)	3.000000	0.000000
P( 4)	4.000000	0.000000
P( 5)	5.000000	0.000000
P( 6)	6.000000	0.000000
P( 7)	7.000000	0.000000
P( 8)	8.000000	0.000000
P( 9)	9.000000	0.000000
P( 10)	10.000000	0.000000

Row	Slack or Surplus	Dual Price
1	92.000000	1.000000
2	0.000000	1.000000
M1	0.000000	9.000000
M2	0.000000	1.000000

LINGO Model (Text Only) - ex\_090909\_1108

```

model:
sets:
  numb/1..10/:x,p;
endsets

max = profit;

profit = @sum(numb(i):p(i)*x(i));

[M1] @sum(numb(i):x(i)) <= 10;
[M2] 1*x(10) <= 2;

data:
p = 1 2 3 4 5 6 7 8 9 10;
enddata

end

```

Range Report - ex\_090909\_1108

Ranges in which the basis is unchanged:

Variable	Current Coefficient	Objective Coefficient Ranges	
		Allowable Increase	Allowable Decrease
PROFIT	1.000000	INFINITY	1.000000
X( 1)	0.0	8.000000	INFINITY
X( 2)	0.0	7.000000	INFINITY
X( 3)	0.0	6.000000	INFINITY
X( 4)	0.0	5.000000	INFINITY
X( 5)	0.0	4.000000	INFINITY
X( 6)	0.0	3.000000	INFINITY
X( 7)	0.0	2.000000	INFINITY
X( 8)	0.0	1.000000	INFINITY
X( 9)	0.0	1.000000	1.000000
X( 10)	0.0	INFINITY	1.000000

Row	Current RHS	Righthand Side Ranges	
		Allowable Increase	Allowable Decrease
2	0.0	INFINITY	92.00000
M1	10.00000	INFINITY	8.000000
M2	2.000000	8.000000	2.000000

LINGO 11 Online Users Manual

122. RANGE REPORTS NOT POSSIBLE WHEN RANGE ANALYSIS IS DISABLED.

Range computations are currently disabled. To enable range computations in Windows versions of LINGO run the [LINGOOptions](#) command, click the [General Solver tab](#), and select the [Prices and Ranges](#) option from the [Dual Computations](#) list box. To enable range computations in command-line versions of LINGO use the command: [SET DUALCO 2](#). Be aware that range computations will increase solution times.

Solution Report - ex\_090909\_1108

Global optimal solution found.  
Objective value: 92.00000  
Infeasibilities: 0.000000  
Total solver iterations: 0

Variable	Value	Reduced Cost
PROFIT	92.00000	0.000000
X( 1)	0.000000	8.000000
X( 2)	0.000000	7.000000
X( 3)	0.000000	6.000000
X( 4)	0.000000	5.000000
X( 5)	0.000000	4.000000
X( 6)	0.000000	3.000000
X( 7)	0.000000	2.000000
X( 8)	0.000000	1.000000
X( 9)	8.000000	0.000000
X( 10)	2.000000	0.000000
P( 1)	1.000000	0.000000
P( 2)	2.000000	0.000000
P( 3)	3.000000	0.000000
P( 4)	4.000000	0.000000
P( 5)	5.000000	0.000000
P( 6)	6.000000	0.000000
P( 7)	7.000000	0.000000
P( 8)	8.000000	0.000000
P( 9)	9.000000	0.000000
P( 10)	10.00000	0.000000

Row	Slack or Surplus	Dual Price
1	92.00000	1.000000
2	0.000000	1.000000
M1	0.000000	9.000000
M2	0.000000	1.000000

Row	Righthand Side Ranges		
	Current RHS	Allowable Increase	Allowable Decrease
2	0.0	INFINITY	92.00000
M1	10.00000	INFINITY	8.000000
M2	2.000000	8.000000	2.000000

### Solution Report - ex\_090909\_1108

Global optimal solution found.

Objective value: 92.00000  
 Infeasibilities: 0.000000  
 Total solver iterations: 0

Variable	Value	Reduced Cost
PROFIT	92.00000	0.000000
X( 1)	0.000000	8.000000
X( 2)	0.000000	7.000000
X( 3)	0.000000	6.000000
X( 4)	0.000000	5.000000
X( 5)	0.000000	4.000000
X( 6)	0.000000	3.000000
X( 7)	0.000000	2.000000
X( 8)	0.000000	1.000000
X( 9)	8.000000	0.000000
X( 10)	2.000000	0.000000
P( 1)	1.000000	0.000000
P( 2)	2.000000	0.000000
P( 3)	3.000000	0.000000
P( 4)	4.000000	0.000000
P( 5)	5.000000	0.000000
P( 6)	6.000000	0.000000
P( 7)	7.000000	0.000000
P( 8)	8.000000	0.000000
P( 9)	9.000000	0.000000
P( 10)	10.00000	0.000000

Row	Slack or Surplus	Dual Price
1	92.00000	1.000000
2	0.000000	1.000000
M1	0.000000	9.000000
M2	0.000000	1.000000

**How to calculate and send dual and other information to textfiles and at the same time to input and export data from Excel:**

```
model:
```

```
sets:
```

```
numb/1..10/:x,p;
```

```
z1;
```

```
endsets
```

```
max = profit;
```

```
profit = @sum(numb(i):p(i)*x(i));
```

```
[M1] @sum(numb(i):x(i)) <= 10;
```

```
[M2] 1*x(10) <= 2;
```

```
data:
```

```
p = @OLE('ex3.XLS');
```

```
@OLE('ex3.XLS')= x;
```

```
@TEXT('ex_X.txt') = @WRITE(@NEWLINE(1), "Product Volume", @NEWLINE(2));
```

```
@TEXT('ex_X.txt') = @WRITEFOR(numb(i): @FORMAT(i, '5.3g'), @FORMAT(x(i), '10.2g'), @NEWLINE(1));
```

```
@TEXT('ex_DUALX.txt') = @WRITE(@NEWLINE(1), "Product DUAL SLACK", @NEWLINE(2));
```

```
@TEXT('ex_DUALX.txt') = @WRITEFOR(numb(i): @FORMAT(i, '5.3g'), @FORMAT(@DUAL(x(i)), '12.2g'), @NEWLINE(1));
```

```
enddata
```

```
end
```

Global optimal solution found.

Objective value: 140.0000  
 Infeasibilities: 0.000000  
 Total solver iterations: 0

Export Summary Report

-----  
 Transfer Method: OLE BASED  
 Workbook: ex3.XLS  
 Ranges Specified: 1  
           X  
 Ranges Found: 1  
 Range Size Mismatches: 0  
 Values Transferred: 10

Variable	Value	Reduced Cost
PROFIT	140.0000	0.000000
X( 1)	0.000000	13.00000
X( 2)	0.000000	12.00000
X( 3)	0.000000	11.00000
X( 4)	10.00000	0.000000
X( 5)	0.000000	9.000000
X( 6)	0.000000	8.000000
X( 7)	0.000000	7.000000
X( 8)	0.000000	6.000000
X( 9)	0.000000	5.000000
X( 10)	0.000000	4.000000
P( 1)	1.000000	0.000000
P( 2)	2.000000	0.000000
P( 3)	3.000000	0.000000
P( 4)	14.00000	0.000000
P( 5)	5.000000	0.000000
P( 6)	6.000000	0.000000
P( 7)	7.000000	0.000000

P( 8)	8.000000	0.000000
P( 9)	9.000000	0.000000
P( 10)	10.000000	0.000000

Row	Slack or Surplus	Dual Price
1	140.0000	1.000000
2	0.000000	1.000000
M1	0.000000	14.000000
M2	2.000000	0.000000



