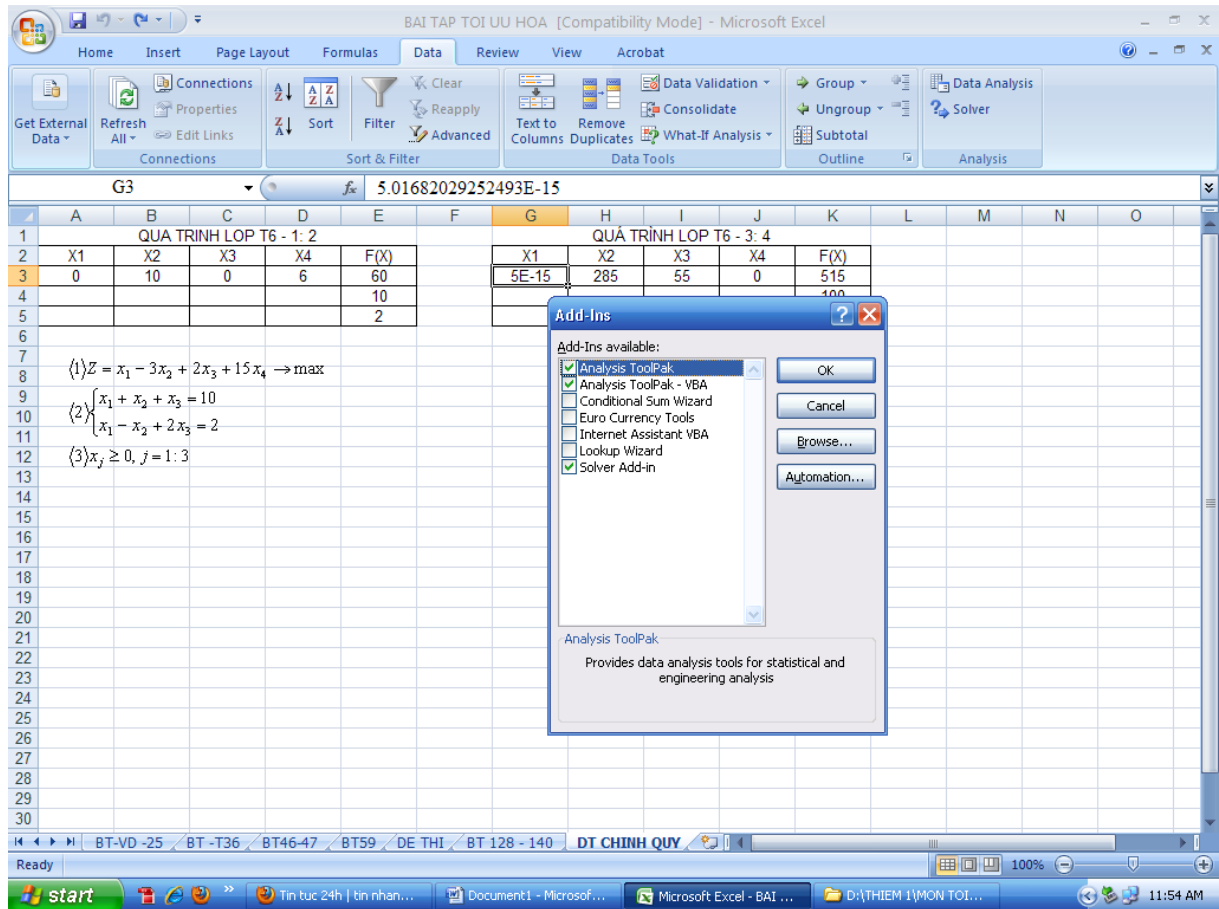


QUY TRÌNH SỬ DỤNG EXCEL GIẢI BÀI TOÁN QHTT

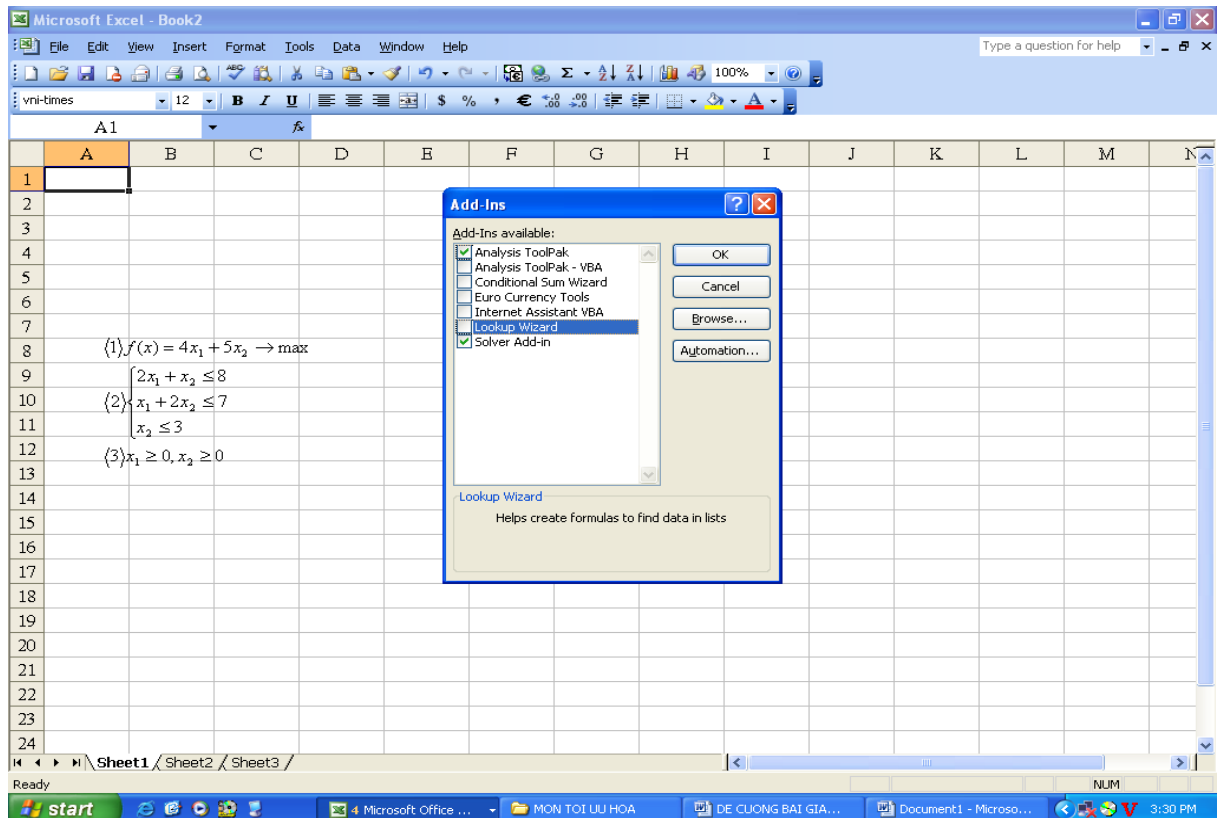
GỌI LỆNH: SOLVER/ EXCEL 2007

More Command/add – ins/solver- add/go/tích theo hình vẽ/ok



GỌI LỆNH: SOLVER/ EXCEL 2003

Tool/add – ins/solver- add/tích theo hình vẽ/ok



CÁCH THỰC HIỆN

Giải bài toán quy hoạch tuyến tính sau:

$$\langle 1 \rangle Z = x_1 + 2x_2 - 1x_3 + 4x_4 \rightarrow \max$$

$$\langle 2 \rangle \begin{cases} x_1 - x_2 + 7x_3 + x_4 = 100 \\ 2x_1 + 3x_2 - x_3 + 10x_4 = 800 \end{cases} \quad (1)$$

$$(2)$$

$$\langle 3 \rangle x_j \geq 0, j = 1 : 4$$

B1: Nhập số liệu:

Quy định biến; ô A3 = X1; ô B3 = X2; ô C3 = X3; ô D3 = X4

Hàm mục tiêu: E3 = A3+2*B3-C3+4*D3

Hàm ràng buộc: (1) - E4 = A3-B3+7*C3+D3

(2) - E5 = 2*A3+3*B3-C3+10*D3

Sử dụng lệnh để giải bài toán QHTT theo trình tự sau:

The screenshot shows a Microsoft Excel spreadsheet titled "BAI TAP TOI UU HOA 1 [Compatibility Mode] - Microsoft Excel". The spreadsheet contains the following data:

	A	B	C	D	E
1					
2	X1	X2	X3	X4	F(X)
3	5E-15	285	55	0	515
4					100
5					800

The Solver Parameters dialog box is open, showing the following settings:

- Set Target Cell: $\$E\3
- Equal To: ☒ Max ☐ Min ☐ Value of: 0
- By Changing Cells: $\$A\$3:\$D\3
- Subject to the Constraints:
 - $\$A\$3:\$D\$3 \geq 0$
 - $\$E\$4 = 100$
 - $\$E\$5 = 800$

A text box at the bottom of the spreadsheet provides instructions for the Solver setup:

Set Target Cell – ô giá trị của hàm mục tiêu
By changing cells – biến chạy của X_j (A3 – D3)
Subject to the constraint – gán các điều kiện ràng buộc chính và ràng buộc phụ

BAI TAP TOI UU HOA 1 [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Acrobat

Get External Data Refresh All Properties Edit Links Connections Sort & Filter Filter Clear Reapply Advanced Text to Columns Remove Duplicates Data Validation Consolidate What-If Analysis Group Ungroup Subtotal Outline Analysis Solver

E3 $=A3+2*B3-C3+4*D3$

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	QUÁ TRÌNH LOP T6 - 3: 4														
2	X1	X2	X3	X4	F(X)										
3	5E-15	285	55	0	515										
4					100										
5					800										
6															
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(1) $Z = x_1 + 2x_2 - 1x_3 + 4x_4 \rightarrow \max$
 (2) $\begin{cases} x_1 - x_2 + 7x_3 + x_4 = 100 \\ 2x_1 + 3x_2 - x_3 + 10x_4 = 800 \end{cases}$
 (3) $x_j \geq 0, j = 1: 4$

Tangent – Hàm Tuyến
tính bậc 1
Quadratic – hàm bậc 2 – 3
Chọn Ok

Solver Options

Max Time: 100 seconds
 Iterations: 100
 Precision: 0.000001
 Tolerance: 5 %
 Convergence: 0.0001

Assume Linear Model
 Assume Non-Negative
 Use Automatic Scaling
 Show Iteration Results

Estimates: Tangent
 Derivatives: Forward
 Search: Newton

OK Cancel Load Model... Save Model... Help

Ready BT-VD-25 BT-T36 BT46-47 BT59 DE THI BT 128 - 140 DT CHINH QUY 100% 12:10 PM

BAI TAP TOI UU HOA 1 [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Acrobat

Get External Data Refresh All Properties Edit Links Connections Sort & Filter Filter Clear Reapply Advanced Text to Columns Remove Duplicates Data Validation Consolidate What-If Analysis Group Ungroup Subtotal Outline Analysis Solver

E3 $=A3+2*B3-C3+4*D3$

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	QUÁ TRÌNH LOP T6 - 3: 4														
2	X1	X2	X3	X4	F(X)										
3	5E-15	285	55	0	515										
4					100										
5					800										
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(1) $Z = x_1 + 2x_2 - 1x_3 + 4x_4 \rightarrow \max$
 (2) $\begin{cases} x_1 - x_2 + 7x_3 + x_4 = 100 \\ 2x_1 + 3x_2 - x_3 + 10x_4 = 800 \end{cases}$
 (3) $x_j \geq 0, j = 1: 4$

Chọn Solver

Solver Parameters

Set Target Cell: $E3$
 Equal To: Max
 By Changing Cells: $A3:D3$

Subject to the Constraints:
 $A3:D3 \geq 0$
 $E4 = 100$
 $E5 = 800$

Solve Close Options Reset All Help

Ready BT46-47 BT59 DE THI BT 128 - 140 Answer Report 1 DT CHINH QUY 100% 12:19 PM

BAI TAP TOI UU HOA 1 [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Acrobat

Get External Data Refresh All Edit Links Connections Sort & Filter Filter Clear Reapply Advanced Text to Columns Remove Duplicates What-If Analysis Data Tools Group Ungroup Subtotal Outline Analysis

E4 $=A3-B3+7*C3+D3$

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	QUÁ TRÌNH LOP T6 - 3: 4														
2	X1	X2	X3	X4	F(X)										
3	5E-15	285	55	0	515										
4					100										
5					800										
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(1) $Z = x_1 + 2x_2 - 1x_3 + 4x_4 \rightarrow \max$

(2) $\begin{cases} x_1 - x_2 + 7x_3 + x_4 = 100 \\ 2x_1 + 3x_2 - x_3 + 10x_4 = 800 \end{cases}$

(3) $x_j \geq 0, j = 1: 4$

Solver Results

Solver found a solution. All constraints and optimality conditions are satisfied.

☒ Keep Solver Solution ☐ Restore Original Values

Reports: Answer, Sensitivity, Limits

OK Cancel Save Scenario... Help

Chọn như hình vẽ

Chú ý nếu không xuất được Answer thì có thể bài toán ko có phương án hoặc Lỗi khi thực hiện...

BT46-47 BT59 DE THI BT 128 - 140 Answer Report 1 DT CHINH QUY

Ready

start Tin tức 24h | tin nhan... Document1 - Microsof... Microsoft Excel - BAI ... D:\THIEM 1\MON TOI... 12:18 PM

BAI TAP TOI UU HOA 1 [Compatibility Mode] - Microsoft Excel

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Get External Data Refresh All Edit Links Connections Sort & Filter Filter Clear Reapply Advanced Text to Columns Remove Duplicates What-If Analysis Data Tools Group Ungroup Subtotal Outline Analysis

A1 $=A3-B3+7*C3+D3$

Microsoft Excel 12.0 Answer Report

Worksheet: [BAI TAP TOI UU HOA 1.xls]DT CHINH QUY

Report Created: 11/11/2011 12:16:15 PM

Target Cell (Max)

Cell	Name	Original Value	Final Value
\$E\$3	F(X)	515	51.5

Adjustable Cells

Cell	Name	Original Value	Final Value
\$A\$3	X1	5E-15	5E-15
\$B\$3	X2	285	28.5
\$C\$3	X3	55	5.5
\$D\$3	X4	0	0

Constraints

Cell	Name	Cell Value	Formula	Status	Slack
\$E\$4	F(X)	10	\$E\$4=10	Not Binding	0
\$E\$5	F(X)	80	\$E\$5=80	Not Binding	0
\$A\$3	X1	5E-15	\$A\$3>=0	Binding	0E+00
\$B\$3	X2	28.5	\$B\$3>=0	Not Binding	28.5
\$C\$3	X3	5.5	\$C\$3>=0	Not Binding	5.5
\$D\$3	X4	0	\$D\$3>=0	Binding	0

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Ready

Average: 49.93181818 Count: 76 Sum: 1098.5 100% 12:25 PM