## QUY TRÌNH SỬ DỤNG EXCEL GIẢI BẢI TOÁN QHTT

## GỌI LỆNH: SOLVER/ EXCEL 2007

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| 1  | А  | B<br>QUA TR   | C<br>RINH LOP                                     | D<br>T6 - 1: 2  | E                          | F                              | G                 | H<br>QU  | I<br>Á TRÌNH LOP T  | J<br>6 - 3: 4                | K  | L  | Μ             | Ν      | 0     |        |        |
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| 6<br>7<br>8<br>9<br>10<br>11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19<br>20 | $ \langle 1 \rangle Z =  \langle 2 \rangle \begin{cases} x_1 \\ x_1 \\ \langle 3 \rangle x_j \ge \end{cases} $ | $x_1 - 3x_2 + x_1 + x_2 + x_3 = -x_2 + 2x_3 = 0, \ j = 1:3$ | 2x <sub>3</sub> + 15x<br>= 10<br><sub>3</sub> = 2 | ₄ → max   |                            |                                |                   | Add-Ins av<br>Analys<br>Condit<br>Euro C<br>Intern<br>Lookup<br>Solver | ailable:<br>s ToolPak - VBA<br>s ToolPak - VBA<br>onal Sum Wizard<br>urrency Tools<br>t Assistant VBA<br>Wizard<br>Add-in |                              | OK<br>Cancel<br>Browse<br>Automation                 |  |               |        |       |        |        |
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## GỌI LỆNH: SOLVER/ EXCEL 2003

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| 8    | \1/               | $\int (x) = \exists x_1$   | $-3\lambda_2 \rightarrow ma$ | ^                         |                             |                               |  | Automa            | ition      |       |           |              |                   |         |
| 10   | (0)               | $2x_1 + x_2 = 1$   | - 7                          |                           |                             |                               |  |                   |            |       |           |              |                   |         |
| 11   | {2;               | $x_1 + 2x_2 \le x_2 \le x_2$ | <u> </u>                     |                           |                             |                               |  |                   |            |       |           |              |                   |         |
| 12   | (0)               | $[x_2 \ge 5$   |                              |                           |                             |                               |  |                   |            |       |           |              |                   |         |
| 13   | (3)               | $x_1 \ge 0, x_2 \ge 0$   | <u>•</u> U                   |                           |                             |                               |  | ~                 |            |       |           |              |                   |         |
| 14   |                   |  |                              |                           | 10                          | okup Wizard                   |  |                   |            |       |           |              |                   |         |
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## CÁCH THỰC HIỆN

Giải bài toán quy hoạch tuyến tính sau:

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

$$\langle 2 \rangle \begin{cases} x_1 - x_2 + 7 x_3 + x_4 = 100 \quad (1) \\ 2 x_1 + 3 x_2 - x_3 + 10 x_4 = 800 \quad (2) \\ \langle 3 \rangle x_j \ge 0, \ j = 1:4 \end{cases}$$

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:

|             | 100              | • (° •   )   | Ŧ   |  | BA                  | I TAP TOI U                        | U HOA 1            | [Compatibi           | lity Mode] ·                             | Microso                       | ft Excel   |                |               |     | _ =     | ×   |
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| 1           | A                |  | C<br>RÌNH LOP T                           | D  | E                   | F                                  | G                  | н                    |  | J                             | K  | L              | M             | N   | 0       |     |
| 2           | X1               | X2   | X3  | X4   | F(X)                | 1                                  |                    |                      |  |                               |  |                |               |     |         |     |
| 3           | 5E-15            | 285  | 55  | 0  | 515                 | 4                                  |                    |                      |  |                               |  |                |               |     |         |     |
| 4           |                  |  |   |  | 100                 |                                    |                    |                      |  |                               |  |                |               |     |         | -   |
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| 7           |                  | /1\7 - 7 -   | 2r = 1r                                   | +4r ->+  | mov                 |                                    |                    |                      |  |                               |  |                |               |     |         |     |
| 8           |                  | $(1/2) = x_1 + (1/2) = x_1 + $ | . 7                                       | 100  | Salva               | Donomotor                          | -                  | 1                    |  |                               |  |                |               |     |         | -11 |
| 10          |                  | $\langle 2 \rangle = \frac{x_1 - x_2}{x_1 - x_2}$  | $\frac{1}{2} + \frac{1}{3} + \frac{1}{3}$ | $t_4 = 100$  | SUIVE               | r Parameter                        | 5                  |                      |  |                               |  |                |               |     |         |     |
| 11          |                  | $(2x_1 +$  | $3x_2 - x_3 +$                            | $10x_4 = 80$   | J Set Ta            | arget Cell:                        | \$E\$3             | <b>1</b>             |  |                               | <u>S</u> olve  |                |               |     |         |     |
| 12          |                  | $\langle 3 \rangle x_j \ge 0,$   | <i>j</i> = 1 : 4                          |  | Equal               | то: 🧿 <u>м</u> .                   | ax 🔿 Mi            | <u>n 🔿 V</u> alu     | ie of: 0                                 |                               | Close  |                |               |     |         | -11 |
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| 19          |                  |  |   |  | \$E\$               | 7 = 100<br>5 = 800                 |                    |                      |  | Change                        |  |                |               |     |         |     |
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| $\frac{7}{8} \qquad \langle 1 \rangle Z = x_1 + 2x_2 - 1x_3 + 4x_4 \rightarrow \max$   | Solver Options   |   |  |  |                         |                |
| 9 $(2\sqrt{x_1-x_2}+7x_3+x_4) = 100$   | May Times  | rands OK  |  |  |                         |                |
| $\begin{array}{c} (1) \\ (1) \\ (2x_1 + 3x_2 - x_3 + 10x_4 = 800 \\ (1) \\ (1) \\ (1) \\ (1) \\ (1) \\ (2) \\ $  | Iterations: 100  |   |  |  |                         |                |
| 12 $(3)x_j \ge 0, j = 1:4$<br>13   | Precision: 0.000001  |   |  |  |                         |                |
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