4. Refer to the LP problem on the next page which represents a model for crashing a PERT

 project.

4a). *According to the optimal solution*, which activities should be crashed and by how many days?

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4b). *According the model formulation*, how much does it cost to crash activity

F?\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4c). *According to the model formulation*, which activity is *impossible* to crash? \_\_\_\_\_\_\_

4d). *According to the solution*, activity C will be completed by what day of the project?

 \_\_\_\_\_\_\_\_\_\_\_

4e). Management wants the project completed in how many days? \_\_\_\_\_\_\_\_\_\_\_\_\_\_

MIN 65YA+50YB+60YC+45YE+70YF

 S.T.

 1) 1YA<1

 2) 1YB<2

 3) 1YC<2

 4) 1YE<2

 5) 1YF<1

 6) 1YA+1XA>20

 7) 1YB-1XA+1XB>16

 8) 1YC-1XB+1XC>18

 9) -1XA+1XD>14

 10) 1YE-1XD+1XE>19

 11) 1YF-1XC+1XF>10

 12) 1YF-1XE+1XF>10

 13) 1XF<60

Objective Function Value = 280.000

 Variable Value Reduced Costs

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 YA 1.000 0.000

 YB 2.000 0.000

 YC 0.000 0.000

 YE 1.000 0.000

 YF 1.000 0.000

 XA 19.000 0.000

 XB 33.000 0.000

 XC 51.000 0.000

 XD 33.000 0.000

 XE 51.000 0.000

 XF 60.000 0.000

 Constraint Slack/Surplus Dual Prices

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 1 0.000 40.000

 2 0.000 10.000

 3 2.000 0.000

 4 1.000 0.000

 5 0.000 35.000

 6 0.000 -105.000

 7 0.000 -60.000

 8 0.000 -60.000

 9 0.000 -45.000

 10 0.000 -45.000

 11 0.000 -60.000

 12 0.000 -45.000

 13 0.000 105.000