# *Business Mathematics II*

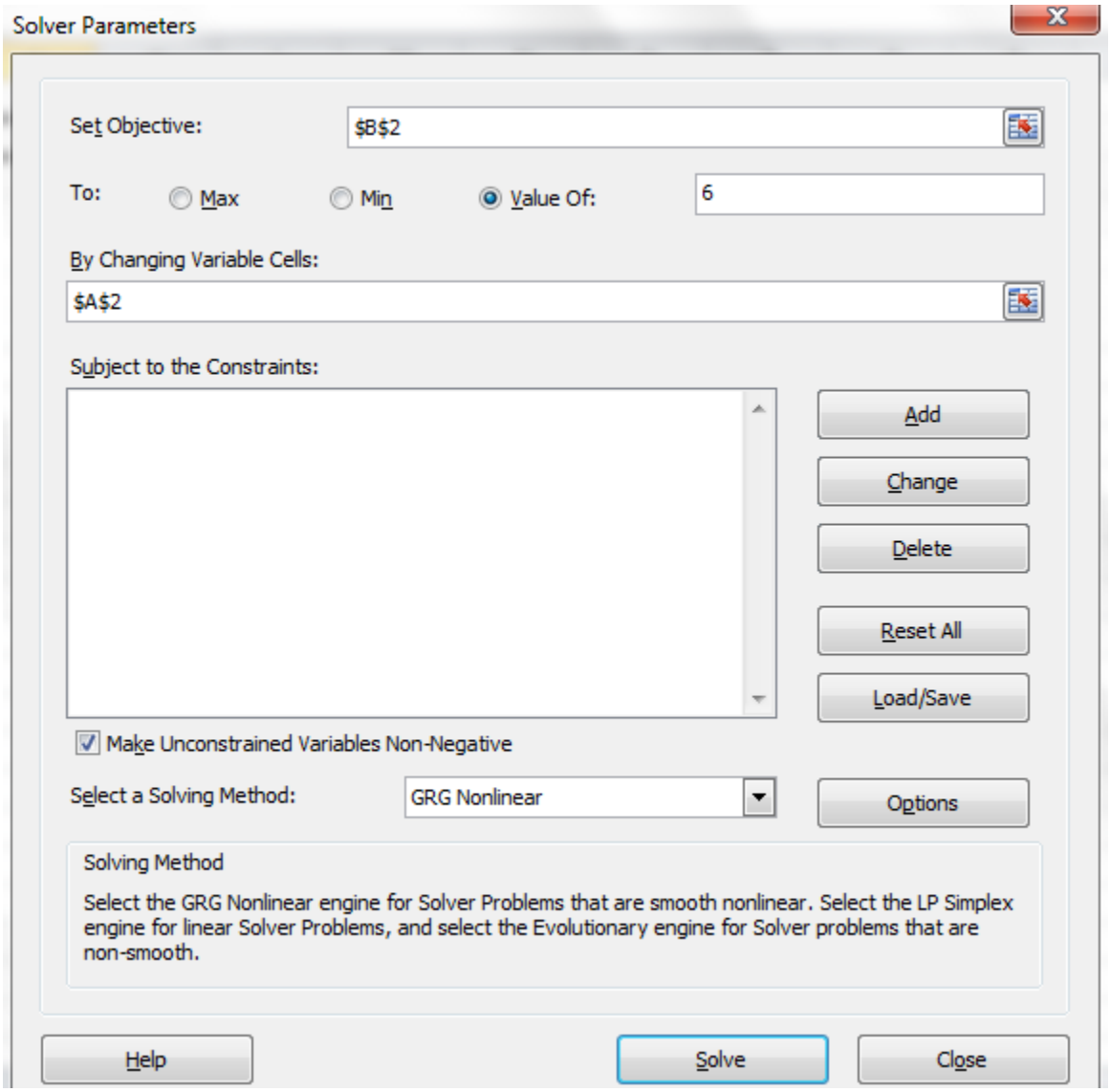
## Answers for Final Exam Study Guide

1. B 7166
2. E 508,378
3. The prediction is not reasonable since there could be significant changes to issues related to automobile accidents by the year 2040.
4. B
5. D
6. $154.60
7. C
8. B
9. C 975
10. 400
11.

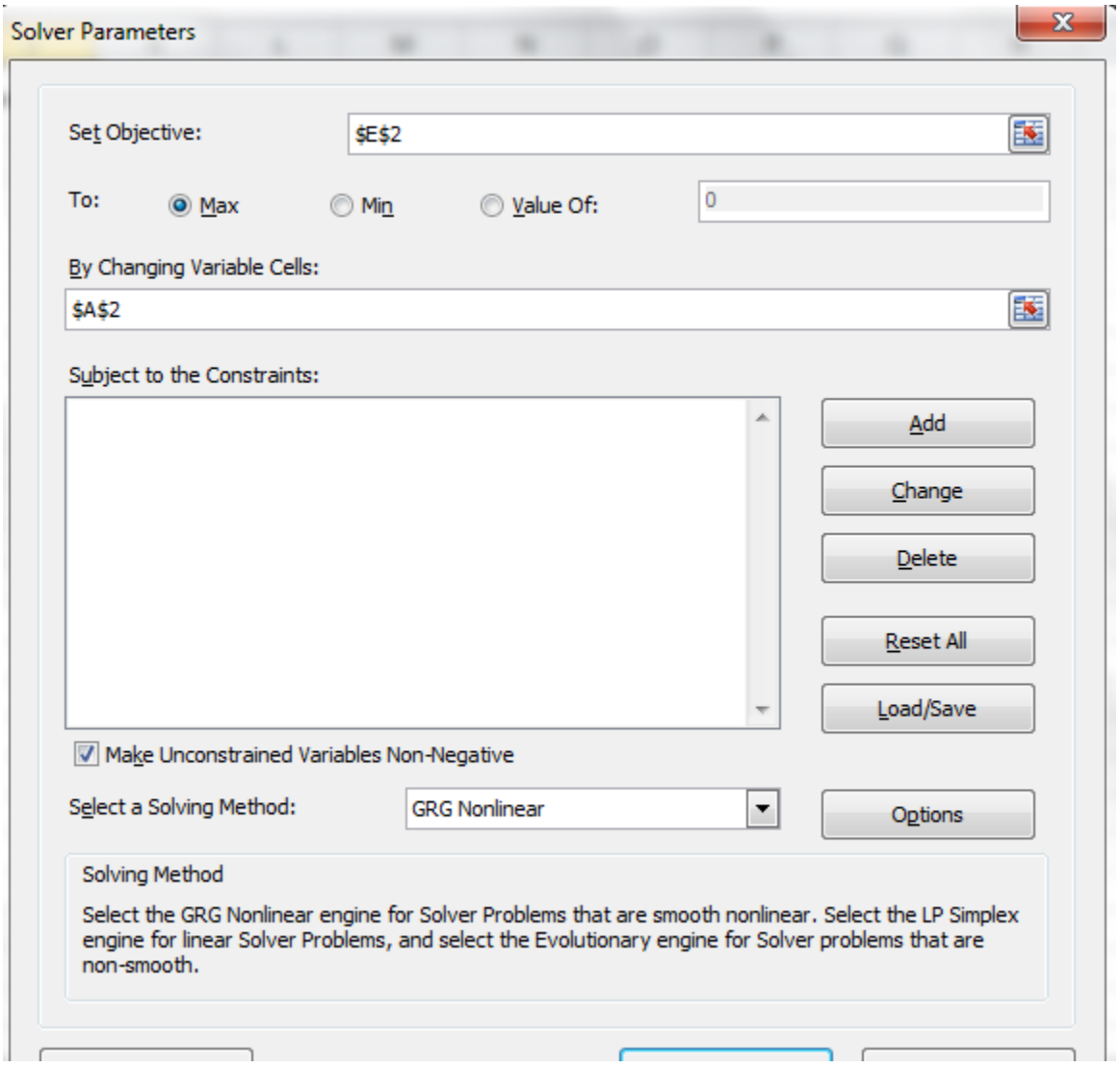
| Definition | Computation | | Plot Interval | | Integration Interval | |
|---|---|---|---|---|---|---|
| Formula for $f(x)$ | $x$ | $f(x)$ | $A$ | $B$ | $a$ | $b$ |
| =-0.0005*x^2+80 | | | 0 | 400 | 0 | 400 |

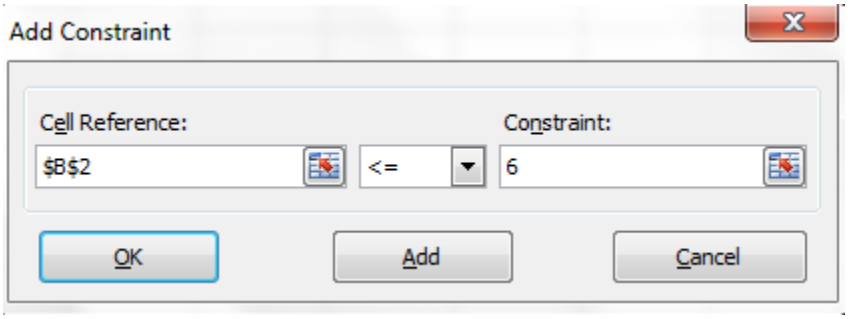
12. B
13. C
14. E
15. $MR(q) = -0.02q + 150$
    $MC(q) = 5$
16. A 7250
17. C
18. 1400 units
19. B
20. D
21. $R(1200) = \$25{,}000$
    $C(1200) = \$25{,}300$
    $MR(1200) = \$400$
    $MC(1200) = \$110$
22. E
23. C 0.2
24. $\approx -0.0683$
25. $y = -0.0683x + 2.5788$
26. C
27. A
28. C
29. D
30. A
31. D

32.

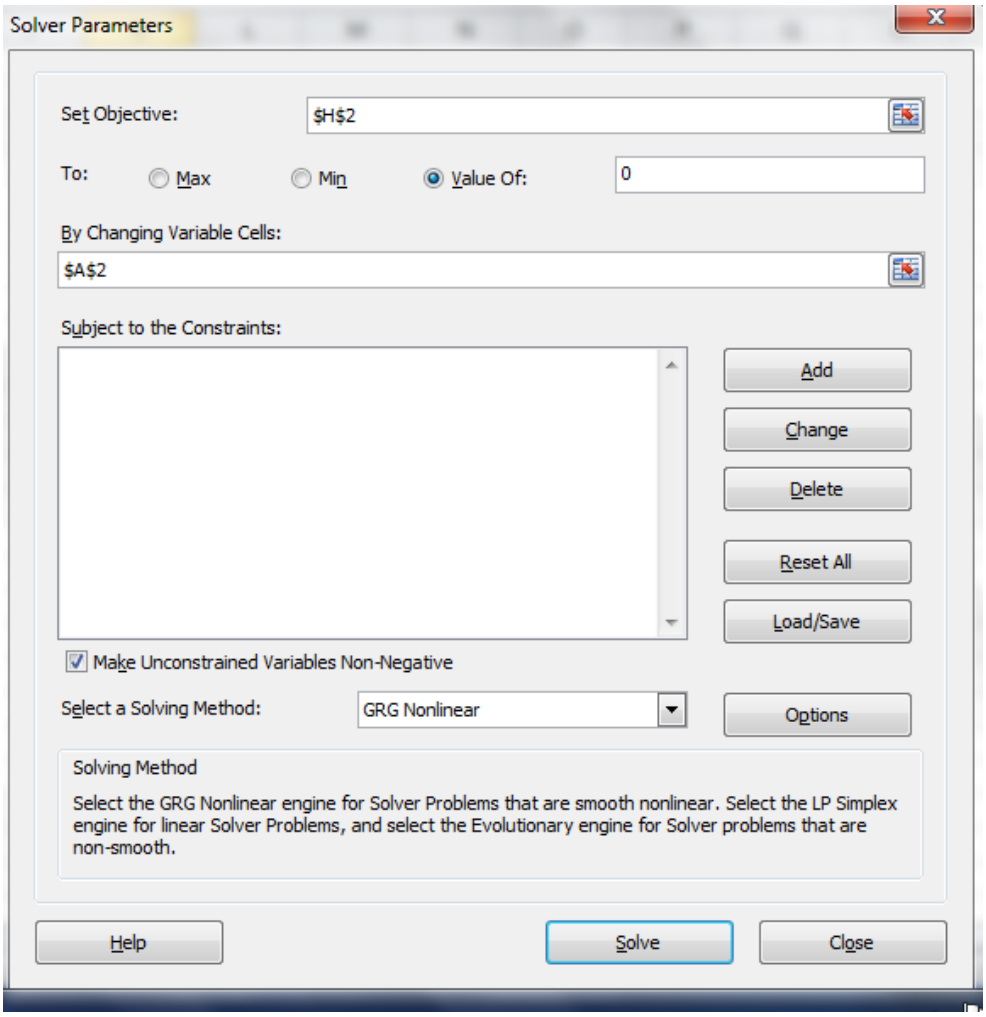

Solver Parameters
Set Objective:
$B$2
To:
Max
Min
Value Of:
6
By Changing Variable Cells:
$A$2
Subject to the Constraints:
Add
Change
Delete
Reset All
Load/Save
Make Unconstrained Variables Non-Negative
Select a Solving Method:
GRG Nonlinear
Options
Solving Method
Select the GRG Nonlinear engine for Solver Problems that are smooth nonlinear. Select the LP Simplex engine for linear Solver Problems, and select the Evolutionary engine for Solver problems that are non-smooth.
Help
Solve
Close

33.


Solver Parameters
Set Objective:
$E$2
To:
Max
Min
Value Of:
0
By Changing Variable Cells:
$A$2
Subject to the Constraints:
Add
Change
Delete
Reset All
Load/Save
Make Unconstrained Variables Non-Negative
Select a Solving Method:
GRG Nonlinear
Options
Solving Method
Select the GRG Nonlinear engine for Solver Problems that are smooth nonlinear. Select the LP Simplex engine for linear Solver Problems, and select the Evolutionary engine for Solver problems that are non-smooth.


Add Constraint
Cell Reference:
Constraint:
$B$2
<=
6
OK
Add
Cancel

34.




35. B
36. D
37. D
38. C
39. E 134.8666
40. B 280.644 thousand
41. A
42. D
43. B
44. C
45. E
46. C
47. A
48. C
49. B
50. A
51. C

52. C
53. E
54. D
55. E
56. B
57. E
58. 0.375
59. 1
60. 3
61. 27
62. 0.1897
63. 8
64. 64
65. 1
66. 0.5
67. 12
68. 25
69. C 31.725
70. D
71. B
72. A
73. A
74. $\bar{x} = 9$
    $s \approx 5.4314$
75. E
76. B
77. D
78. D
79. A
80. $\$28{,}645.20 < M < \$47{,}638.80$
81. D
82. B
83. E
84. D
85. A
86. A
87. D
88.

| Leases | Errors | |
|---|---|---|
| Proven Value | Company 1 Errors | Company 2 Errors |
| $ 273.6 | -$5.20 | $5.50 |
| $ 153.7 | $7.50 | -$5.70 |
| $ 189.4 | -$10.10 | $4.10 |

89. C

90. B
91. C
92. B
93. A