

Eco 1010 Fall 2006
Assigned Questions

Below are listed all the problems for the entire course. By the end of each day we shall decide which sections are due for the next morning. You should try as many of the problems as you can in the sections designated for that day. However, you need hand in only the **EVEN NUMBERED** problems **IN EACH SECTION** shown below.

1. Page 9 Section 1.3, **Symbols in Mathematics**

- 1
- 3

2. Page 18 Section 1.4 **The Real Number Line**

- 2
- 4
- 7

3. Page 24 Section 1.5 **A Few Aspects of Logic**

- 2
- 5
- 7

4. Page 34 Section 1.7 **Set Theory**

- 1
- 5
- 6
- 8

5. Page 44 Section 2.2 **Functions of One Real Variable**

- 1
- 3
- 4
- 10
- 16

6. Page 52 Section 2.3 **Graphs**

- 1

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7. Page 70 Section 2.5 **Linear Functions**

- 1
- 6
- 8
- 10
- 12
- 16

8. Page 112 Section 4.2 **The Slope of the Tangent and the Derivative**

- 1
- 5

9. Page 125 Section 4.4 **A Dash of Limits**

- 1
- 3

10. Page 131 Section 4.5 **Simple Rules for Differentiation**

- 1
- 6

11. Page 139 Section 4.6 **Differentiation of Sums, Products and Quotients**

- 1
- 3
- 4

12. Page 142 Section 4.7 **Second- and Higher- Order Derivatives**

- 1
- 3

13. Page 153 Section 5.2 **Composite Functions and the Chain Rule**

- 2
- 8

14. Page 161 Section 5.3 **Implicit Differentiation**

- 1

- 2

15. Page 183 Section 6.1 **Limits**

- 1

- 3

16. Page 190 Section 6.2 **Continuity**

- 3

- 5

17. Page 217 Section 7.1 **The Intermediate Value Theorem**

- 1

18. Page 221 Section 7.2 **The Extreme Value Theorem**

- 1

- 2

19. Page 236 Section 7.5 **Indeterminate Forms and L'Hôpital's Rule**

- 1

- 2

- 3

20. Page 245 Section 7.6 **Inverse Functions**

- 1

- 3

- 4

21. Page 252 Section 8.1 **The Natural Exponential Function**

- 1

- 2

22. Page 260 Section 8.2 **The Natural Logarithmic Function**

- 1

- 3

- 7

- 10
23. Page 289 Section 9.2 **A First-Derivative Test for Extreme Points**
- 1
24. Page 294 Section 9.3 **Alternative Ways of Finding Maxima and Minima**
- 1
 - 4
 - 8
25. Page 302 Section 9.4 **Local Maxima and Minima**
- 1
 - 9
26. Page 312 Section 9.5 **Convex and Concave Functions and Inflection Points**
- 1
 - 3
27. Page 318 Section 9.6 **More on Concave and Convex Functions**
- 1
 - 3
28. Page 326 Section 10.1 **Areas Under Curves**
- 1
29. Page 332 Section 10.2 **Indefinite Integrals**
- 1a, 1b
 - 7
30. Page 338 Section 10.3 **The Definite Integral**
- 1
 - 2
 - 3
31. Page 398 Section 12.5 **Straight Lines and Planes**
- 1
 - 2

- 3

- 4

32. Page 352 Section 11.1 **Integration by Parts**

- 1

- 2

- 4

33. page 428 Section 13.2 **Determinants of Order 3**

- 1

- 2

34. page 432 Section 13.3 **Determinants of Order n**

- 1

- 2

- 3

35. page 443 Section 13.5 **Expansion by Cofactors**

- 1

- 2

36. page 454 Section 13.7 **A General Formula for the Inverse of a Matrix**

- 1

- 2

37. Page 495 Section 15.1 **Functions of Two or More Variables**

- 1

- 2

- 3

- 6

38. Page 503 Section 15.2 **Geometric Representation of Functions of Several Variables**

- 1

- 2

39. Page 509 Section 15.3 **Partial Derivatives with Two Variables**

- 1
- 2
- 8

40. Page 513 Section 15.4 **Partial Derivatives with Tangent Planes**

- 2
- 3

41. Page 516 Section 15.5 **Partial Derivatives with Many Variables**

- 1
- 2

42. Page 530 Section 15.8 **Quadratic Forms in Two Variables**

- 1
- 2

43. Page 536 Section 15.9 **Quadratic Forms in Many Variables**

- 2
- 3

44. Page 544 Section 16.1 **The Chain Rule**

- 1
- 2

45. Page 549 Section 16.2 **More General Chain Rule**

- 1
- 6
- 7

46. Page 558 Section 16.3 **Derivatives of Functions Defined Implicitly**

- 1
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- 4

47. Page 569 Section 16.5 **Homogenous Functions of Two Variables**

- 1

- 3
- 6

48. Page 583 Section 16.8 **Linear Approximations and Differentials**

- 1
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- 9

49. Page 590 Section 16.9 **Systems of Equations**

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- 2

50. Page 605 Section 17.2 **Maximizing and Minimizing with a Dash of Topology**

- 1
- 2

51. Page 611 Section 17.3 **The Extreme Value Theorem and How to Use It**

- 1
- 2

52. Page 616 Section 17.4 **Local Extreme Points**

- 1
- 2a, 2b
- 9

53. Page 620 Section 17.5 **Convex Sets**

- 1
- 2a, 2c
- 3

54. Page 631 Section 17.7 **Useful Conditions for Concavity and Convexity**

- 1

55. Page 635 Section 17.8 **Second Derivative Test for Concavity/Convexity: The 2-Variable Case**

- 4

- 5
 - 8
56. Page 642 Section 17.9 **Second Derivative Test for Concavity/Convexity: The n-Variable Case**
- 2a
57. Page 649 Section 17.10 **Quasiconcave and Quasiconvex Functions**
- 1
 - 2
 - 3
58. Page 660 Section 18.2 **The Lagrange Multiplier Method**
- 1
 - 4
59. Page 669 Section 18.4 **Sufficient Conditions**
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60. Page 673 Section 18.5 **More General Lagrangean Problems**
- 1
 - 2
61. Page 678 Section 18.6 **Economic Interpretations of Lagrange Multipliers**
- 2
62. Page 681 Section 18.7 **Envelope Results**
- 1
63. Page 690 Section 18.8 **Nonlinear Programming: A Rough Guide**
- 1
 - 4
64. Page 702 Section 18.10 **Precise Results**
- 1
 - 2

65. Page 332 Section 10.3 **Indefinite Integrals**

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66. Page 338 Section 10.4 **The Definite Integral**

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67. Page 352 Section 11.1 **Integration by Parts**

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