Math 112, sections 1-5
Homework Schedule
Winter 2013

| Lecture Date | Section | Read this section before class | $\left\lvert\, \begin{aligned} & \text { Paper } \\ & \text { Assignm } \\ & \text { ent } \end{aligned}\right.$ | Section | Assigned Paper Exercises | Paper <br> Due Date | Online Assignment | Online Due Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7-Jan | 1.1/1.2 | Functions | HW 1 | $1.1$ | $3,12,21,46,55,72 ;$ | 11-Jan | Intro | 10-Jan |
| 9-Jan | 1.3 | New Functions from Old Functions | HW 2 | 1.3 | 1, 7, 13, 21, 30, 33, 47, 55 | 14-Jan | 1.3 | 17-Jan |
| 11-Jan | Appx D | Trigonometry | HW 3 | Appx D | 24, 27, 37, 46, 53, 73, 79 | 16-Jan | Appx D | 17-Jan |
| 14-Jan | 1.5 | Exponential Functions | HW 4 | 1.5 | 3, 4, 11, 12, 19, 21, 23, 24, 25 | 18-Jan | 1.5 | 17-Jan |
| 16-Jan | 1.6 | Inverse Functions and Logarithms | HW 5 | 1.6 | 18, 48, 49, 71, 75 | 23-Jan | 1.6 | 21-Jan |
|  |  |  | Pretest runs from Jan 14-16 (late day Jan 17) |  |  |  |  |  |
| 18-Jan | 2.1/2.2 | Tangent \& Velocity/Limits | HW 6 | $\begin{aligned} & 2.1 \\ & 2.2 \end{aligned}$ | $\begin{aligned} & 5,7 \\ & 6,9,16,33,34,38 a, 43,46 \end{aligned}$ | 25-Jan | 2.1-2 | 22-Jan |
| 23-Jan | 2.3 | Calculating Limits | HW 7 | 2.3 | 10, 17, 20, 21, 25, 26, 28 | 28-Jan | 2.3 | 27-Jan |
| 25-Jan | 2.3 | Calculating Limits (cont.) | HW 8 | 2.3 | 38, 39, 41, 44, 57, 58, 60 | 30-Jan | 2.3b | 29-Jan |
| 28-Jan | 2.4 | The Precise Definition of a Limit | HW 9 | 2.4 | 1, 2, 7, 11, 13 | 1-Feb | 2.4 | 31-Jan |
| 30-Jan | 2.5 | Continuity | HW 10 | 2.5 | 4, 6, 7, 17, 20, 23, 25, 47ab, 62 | 4-Feb | 2.5 | $3-\mathrm{Feb}$ |
| 1-Feb | 2.5 | Continuity (cont.) | HW 11 | 2.5 | 35, 36, 40, 41, 43, 45, 49, 53 | 6-Feb | 2.5b | 5-Feb |
| 4-Feb | 2.6 | Limits at Infinity and Asymptotes | HW 12 | 2.6 | 4, 5, 7, 10, 13, 24, 35, 43, 50 | 8-Feb | 2.6 | 7-Feb |
| 6-Feb | 2.7 | Derivatives and Rate of Change | HW 13 | 2.7 | 3ab, 7, 12, 17, 18, 19, 21, 22, 33, 47, 48 | 11-Feb | 2.7 | 10-Feb |
| 8-Feb | 2.8 | The Derivative as a Function | HW 14 | 2.8 | 3, $5,6,11,22,27,40,46$, And: Prove that if $f$ is differentiable at a, then $f$ is continuous at a. | 13-Feb | 2.8 | 12-Feb |
| 11-Feb | Rev | Chapters 1 and 2 Review | HW 15 | Ch1 Rev Ch2 Rev | $\begin{aligned} & \text { (p. } 73 \text { ) } 11,17,23,25 \\ & \text { (p. 167) 2, 33, 47, } 48 \end{aligned}$ | 15-Feb | Exam 1 Rev | 14-Feb |
|  |  | Exam 1 (Sections 1.1-2.8) | Feb 12-13 (late day Feb 14) |  |  |  |  |  |
| 13-Feb | 3.1 | Deriv. of Polys and Exponentials | HW 16 | 3.1 | 4, 11, 16, 23, 26, 55, 61, 74, 77 | 19-Feb | 3.1 | 18-Feb |
| 15-Feb | 3.2 | The Product and Quotient Rules | HW 17 | 3.2 | 2, 11, 23, 24, 32, 42, 49, 51, 59 | 20-Feb | 3.2 | 19-Feb |
| 19-Feb | 3.3 | Derivatives of Trig. Functions | HW 18 | 3.3 | 9, 10, 18, 20, 35, 42, 45, 49 | 22 -Feb | 3.3 22-Feb |  |
| 20-Feb | 3.4 | The Chain Rule | HW 19 | 3.4 | 12, 19, 25, 31, 41, 47, 63, 65, 92 | $25-\mathrm{Feb}$ | 3.4 | 24-Feb |
| 22-Feb | 3.5 | Implicit Differentiation | HW 20 | 3.5 | 3, 15, 21, 25, 36, 53, 55, 63 | 27-Feb | 3.5 | 26-Feb |
| 25-Feb | 3.6 | Derivatives of Log Functions | HW 21 | 3.6 | 7, 16, 24, 27, 33, 40, 46, 47, 53 | 1-Mar | 3.6 28-Feb |  |
| 27-Feb | 3.7 | Rates of Change in Sciences | HW 22 | 3.7 | 5, 18, 23ab, 31, 33 | 4-Mar | 3.7 3-Mar |  |
| 1-Mar | 3.9 | Related Rates | HW 223.9 $5,22,33,35,37,42$ $6-\mathrm{Mar}$ |  |  |  | 3.9 5-Mar |  |
| 4-Mar | 4.1 | Maximum and Minimum Values | HW $244.13,7,9,10,11,13,35,38,57,60,74,76$ - $4 . \mathrm{Mar}$ |  |  |  | 4.1 7-Mar |  |
| 6-Mar | 4.2 | The Mean Value Theorem | HW $254.27,15,17,28,29,30,35$ 11-Mar |  |  |  | 4.2 10-Mar |  |
| 8-Mar | Rev | Chapters 3 and 4.1-2 Review | HW 26 | Ch3 Rev Ch4 Rev | (p. 265) 53 13-Mar <br> (p. 352) 5,45  <br> Mar 11-12 (late day Mar 13) |  | Exam 2 Rev 13-Mar |  |
|  |  | Exam 2 (Sections 3.1-3.9, 4.1-4.2) |  |  |  |  |  |  |
| 11-Mar | 4.3 | Shape of a Graph | HW 27 | 4.3 | 1, 6, 7, 21, 23, 25, 28, 32, 62, 74 | 15-Mar | 4.3 | 14-Mar |
| 13-Mar | 4.4 | Indet. Forms - L'Hospital's Rule | HW 28 | 4.4 | 4, 11, 17, 29, 33, 41, 50, 57 | 18-Mar | 4.4 | 17-Mar |
| 15-Mar | 4.5 | Curve Sketching | HW 29 | 4.5 | 5, 9, 10, 17, And turn in graphs from online homework | 20-Mar | 4.5 19-Mar |  |
| 18-Mar | 4.7 | Optimization Problems | HW 30 | 4.7 | 7, 14, 20, 33, 57 | 22-Mar | 4.7 | 21-Mar |
| 20-Mar | 4.7 | Optimization Problems | HW 31 | 4.7 | 13, 19, 23, 32, 18, 28, 30, 67 | 25-Mar | 4.7b | 24-Mar |
| 22-Mar | 3.10/4.8 | Linear Approx./Newton's Method | $4.8 \quad 1,2,3,4,29$ |  |  |  | 3.10/4.8 $26-\mathrm{Mar}$ |  |
| 25-Mar | 4.9 | Antiderivatives | HW 334.9 12, 15, 17, 27, 34, 41, 51, 53, 55,69, 71 29-Mar |  |  |  |  |  |
| 27-Mar | Appx E | Sigma Notation | HW 34 Appx E 5, 10, 13, 20, 23, 30, 35,41cd, 43 1-Apr |  |  |  | Appx E | 31-Mar |
| 29-Mar | 5.1/5.2 | Areas \& Distance/Definite Integral | HW 35 | $\begin{aligned} & 5.1 \\ & 5.2 \end{aligned}$ | $1 \mathrm{a}, 14,21,23$ $3-\mathrm{Apr}$ <br> $5 \mathrm{ab}, 17,29,71$  |  | 5.1/5.2 $2-\mathrm{Apr}$ |  |
| $\begin{aligned} & \text { 1-Apr } \\ & \text { 3-Apr } \end{aligned}$ | 5.2 | The Definite Integral (cont.) | HW $365.233,37,43,47,49,50,51,52,59,67$ 5-Apr |  |  |  | 5.2b 4-Apr |  |
|  | Rev | Chapter 4 Review |  |  | (p. 352) 15,18 <br> (p. 418) 51 |  | Exam 3 Rev 7-Apr |  |
|  | Exam 3 (Sections 3.10, 4.3-5.2) |  |  |  |  |
| 5-Apr | 5.3 | Fundamental Theorem of Calculus | HW 385.3 1, 3, 9, 12, 15,55,58,62,67 10-Apr |  |  |  | 5.3 9-Apr |  |
| 8-Apr | 5.3 | Fund. Theorem of Calculus (cont.) | HW 395.3 22, 29, $31,43,45,63,69,70,78$ 2-Apr |  |  |  | 5.3b 11-Apr |  |
| 10-Apr | 5.4 | Indefinite Integrals and Net Change |  |  |  |  | 5.4 14-Apr |  |
| 12-Apr | 5.5 | The Substitution Rule | HW 415.5 5, 9, 18, 25, 38, 47, 48, 59, 67, 70, 77, 87 17-Apr |  |  |  | 5.5 16-Apr |  |
| 15-Apr | Rev | Chapter 5 Review | HW 42 Ch5 Rev (p.418) 7, 12, 29, 44, 51, 57 |  |  |  | Final Rev 16-Apr |  |
| 17-Apr | Rev | Review for Final |  |  |  |  |  |  |

