

Math 100 MTWRF
College Algebra

Text: *College Algebra Through Modeling and Visualization*, 3rd edition, Rockswold, Addison-Wesley, 2006.

Prerequisites: ACT score of at least 18; Grade of "C" or better in MATH 092 or equivalent course; or Placement in MATH 100 by the Mathematics Department Placement Exam. **TI-83 Graphics Calculator is required.**

Study groups, tutoring, video taped lectures and other related services are available in The Learning Center in Lee Hall.

The problems listed are mandatory problems for each section. Additional practice problems are listed in [] if you need more.

Lesson	Section and Topic	Assignment
1	Basic review	Arithmetic with signed numbers, Order of operations, Factoring, Linear equations
2	1.1 Numbers, Data, and Problem Solving	p. 11: 39, 40, 63-68, 71, 72, 75, 78; <i>additional practice</i> [69, 70, 73, 77]
3	1.1 Numbers, Data, and Problem Solving (cont.)	p. 12: 79, 81, 82, 85, 90, 93, 95; <i>additional practice</i> [89, 96, 98]
4	1.2 Visualization of Data	p. 26: 17, 41, 42, 92; on graph paper do 64, 65, 67, 68; [18a, 21-34, 61, 62, 63, 66, 91]
5	1.2 Visualization of Data (cont.)	p. 27: 81, 82, 83, 89, 90; [87, 88, CBC 1, 2]
6	1.3 Functions and Their Representations	p. 44: 78, 80, 82, 87, 88, 91 - 96, 108; [77, 79, 81, 89, 90]
7	1.3 Functions (cont.)	p. 42: 38, 40, 42, 44, 45, 50, 53, 56, 57, 58, 71, 72, 74, 76, 106; [37, 39, 41, 43, 47, 49, 54, 55, 75bc]
8	1.3 Functions (cont.)	p. 42: 24, 26 - 30, 32, 33, 34, 36, 60, 61, 62; [23, 25, 31, 35]
9	1.4 Types of Functions and Their Rates of Change	p. 58: On graph paper plot the points, count the rise and run, calculate the slope for 2, 6, 8, and 14; 19 - 22, 25 - 28, 76, 77, 80, 82, 83; Turn in your height, in inches, the size tennis shoe that you wear and your gender on a sheet of paper. [1, 3, 4, 5, 7, 9, 10-13, 17, 18, 23, 24, 75, 79]
10	1.4 Types of Functions (cont.)	p. 59: 53, 55, 56, 58, 63 - 67, 69 - 72, 85, 88; [31, 35-52, 54, CBC p. 62: 3, 4, 6, 7, 8]
11	2.1 Linear Functions and Models	p. 83: 5, 8, 9, 10, 14, 19, 20, 24, 26, 27, 30, 33, 36, 38, 40, 41; [42, 43]
12	2.1 Linear Functions and Models (cont.)	p. 84: 42, 46, 47, 48, 54; 54d) Find a least squares regression model for the data in 54.
13	2.1 Linear Functions and Models (cont.)	p. 85: 61, 62, 63, p. 87: 1
14	Chapter 1 Review	p. 66: 11, 13, 14, 21, 22, 30, 43, 44, 45, 47, 48, 49, 51, 52, 53, 55, 56, 57, 60, 61, 63, 64, 69-76, 78, 85, 86, 87, 88, 89, 90; p. 26: 41, 42
15	Chapter 2 Review	p. 162: 1, 2, 8, 10, 80, 86, 97bc; p. 167-170: 1, 4, 16, 58, 60, 61, 62
16	TEST 1	Chapter 1 and Section 2.1
17	2.2 Equations of Lines	p. 99: 12, 18, 19, 22, 24, 29, 32, 37, 43, 45, 46, 49, 50, 51, 52, 79cb
18	2.2 Equations of Lines (cont.)	p. 101: 63, 68, 80bc, 81, 82, 84 (use regression), 86 ($y = mx + b$ form), 90 (use regression); [88, 89]
19	2.2 Equations of Lines (cont.)	p. 104: 103, 104, 106, 107; Extended Discovery 1; [108, 109; p. 105: 2; p. 106: 3-7]
	2.3 Linear Equations	p. 118: 22, 24, 26, 30; [p. 118: 21, 23, 25]
20	2.3 Linear Equations (cont.)	p. 118: 32(a), 34(a), 39(a), 47, 49, 60, 62, 63, 64, 79, 80, 83, 84; [38a, 42a, 43a, 44a, 48, 61, 75, 76, 77, 78]
21	2.3 Linear Equations (cont.)	p. 121: 86, 89, 90, 91, 93, 94, 106, 108, 112; [111, 120]
22	2.4 Linear Inequalities	p. 134: 4-12, even 18-34; 15, 16, 19, 21, 27, 29, 31, 33, 37, 38, 40]
23	2.4 Linear Inequalities (cont.)	p. 135: 64, 69, 70, 71, 72, 82, 85, 88; [67, 83, 87]
24	2.4 Linear Inequalities (cont.)	p. 137: 91, 92, 93 (use $T = mx + b$); p. 138: 98, use regression for 103, 104; [p. 139: CBC 1ac, 3, 4]
25	2.5 Piecewise-Defined Functions	p. 152: 2, 3, 6, 7, 10, 15-22; [5, 6, 9, 11]
26	2.5 Piecewise-Defined Functions (cont.)	p. 154: 42, 46, 48, 49, 50, 59, 60, 62, 63, 64, 68, 70, 71, 76, 78, 80; [41, 45, 47, 52, 61, 65, 66, 67, 72, 73, 77, 79, 81]
27	2.5 Piecewise-Defined Functions (cont.)	p. 152: 83, 84, 85, 92, 97, 99, 100, 103, 109, 110; [95, p. 158: CBC 1, 4, 5]

Lesson	Section and Topic	Assignment
28	3.1 Quadratic Functions and Models	p. 184: 9,10,11,12,26,28,31,33,38, find the axis of symmetry, the vertex and sketch the graph for 75,76; [25,27,29,36]
29	3.1 Quadratic Functions and Models (cont.)	p. 184: 81,83,86,88,104,use regression for 107,108
30	Chapter 2 Review	p. 162: 14-18,22,25,31,32,38(a),40(a),50,51,52,57,58,59,63,65,68,69,74,75,76,77, 79,82,83,85,94
31	Chapters 2 and 3 Review	p. 168: 24; p. 237: 1,2,7,8,70abc,71abc,72
32	TEST 2	Sections 2.2,2.3,2.4,2.5,3.1
33	3.2 Quadratic Equations and Problem Solving	p. 201: 3,8,12,16,19,20,21,28,29,36,49ac omit discriminant,60ac; [4,6,11,13,14,15,22,25,26,27,35,47ac,51ac,53ac,54ac,59ac]
34	3.2 Quadratic Equations and Problem Solving (cont.)	p. 203: Omit set-builder notation for 81-84; 97,100,101,103,105,106,110; [98,99]
35	4.1 Nonlinear Functions and Their Graphs	p. 251: 12,14,28,37,41,43,56,61,65,116; [13,15,19,23,27,35,51,55,57,63,64]
36	4.1 Nonlinear Functions and Their Graphs (cont.) 4.2 Polynomial Functions and Models	p. 254: 103,105,117,118; [104,106,123] p. 268: 2,4,6,8,14,18,26,27,30,38,42,46,47,48,54; [3,5,7,9,10,13,15,16,17,24,25,28,33,36]
37	4.2 Polynomial Functions and Models (cont.)	p. 270: 68,69,76,77,81,87,88,90; [70,71,73,75,85,86]
38	4.3 Real Zeros of Polynomial Functions	p. 289: 41,42,45,46,47,50,52,55,58; [48,49,53,54,56,59]
39	4.3 Real Zeros of Polynomial Functions (cont.)	p. 290: 73,75,78,81,86,87,99,100,106,112; [74,76,77,79,80,82,83,84,85,97,98,101-122]
40	4.3 Real Zeros of Polynomial Functions (cont.)	p. 291: 124,126,128,131,133,140; [123,125,127,134]
41	Chapter 3 Review Section 4.1,4.2	p. 237: 23ab,24ab,29,36,71,72,73,76 p. 352: 1 - 7,10,19,20,23,24,25,27
42	Section 4.2,4.3	p. 353: 29,41,42,47-56,122,123,124; p. 358: 1,6,8,10,13,18,25,43,44 abd,55,65,72; [12,16,27,28]
43	TEST 3	Sections 3.2,4.1,4.2,4.3
44	4.5 Rational Functions and Models	p. 319: 1,4,9,57ab,58ab,59ab,61ab,62ab,82ab,83ab,86,89,91,92,96; [3,5,11,88,95]
45	4.5 Rational Functions and Models(cont.)	p. 321: 101,116,117,120,122,123,124,136,138; [104,105,110,111]
46	4.7 Power Functions and Radical Equations	p. 343: 1,4,5,8,10,12,14,16,18,35,36; [11,13,21,22; Exponential review p. R-18 and R-19 Column 1]
47	4.7 Power Functions and Radical Equations (cont.)	p. 344: 65,68,70,71,72,77,78,79; [81]
48	4.7 Power Functions and Radical Equations (cont.)	p. 345: 84,89ab,90,96; Extended Discovery 3; CBC 1ab,3
49	5.1 Combining Functions	p. 375: 1,3,6,8,9,10,15,23,24,39,40,42,45,99,115,120; [2,5,16,25,27,44,49]
50	5.1 Combining Functions (cont.)	p. 377: 53,58,59,63,64,omit domain 66ab,72ab,77ab,79ab,80ab,105,106,107,129,130; [54,57,61, Omit domain on 67ab,71ab,73ab,75ab,108]
51	5.2 Inverse Functions and Their Representations	p. 393: 13,14,15,16,21,22,23,24,26,28,38,39,40; [18,19,20,25,29,33]
52	5.2 Inverse Functions and Their Representations (cont.)	p. 394: 41,42,45,46,47,71,74,75,76,81,93,94,96,97,99; [73,82,84]
53	5.2 Inverse Functions and Their Representations (cont.)	p. 395: 102,103,105,106,109,110,111,121,123,129; p. 399: CBC 2,3,4; [p. 395: 108,122,124]
54	Chapter 4 Review ;br> Sections 4.5,4.7 Sections 4.5,4.7	p. 355: 74ac,82,84,87,88,97,109,112,113,126,128
55	Chapter 5 Review Sections 5.1,5.2	p. 468: 1,2,4,5,6,7,9(omit domain),11(omit domain),15,16,17,18,21,23,24,25, 26,28,31,32,90,91,92
56	TEST 4	Sections 4.5,4.7,5.1,5.2

Lesson	Section and Topic	Assignment
57	5.3 Exponential Functions and Models	p. 412: 5,8,11,14,18,19,20,21,29,30,32,37,39,42,53,54,56,57,63,66
58	5.3 Exponential Functions and Models (cont.)	p. 415: 69,70,72,73,74,78,79, Use regression on 93,94,97,99,100,106,107,108
59	5.4 Logarithmic Functions and Models	p. 430: 2,6,7,11,12,14,15,19,22,24,27,28,31,32,33,36,38,39,45; $[1, 5, 8]$
60	5.4 Logarithmic Functions and Models (cont.)	p. 431: 53,54,57,58,62,65,70,71,73,79,80; p. 433: 115,120,123
61	5.6 Exponential and Logarithmic Equations	p. 435: CBC 1,2,3,5; p. 453: 4,8,12,14,18,20,21,33,34,41,42
62	5.6 Exponential and Logarithmic Equations (cont.)	p. 453: 70,71,82,86
	5.7 Constructing Nonlinear Models	p. 462: 9,11,14; CBC 1
63	6.1 Functions and Equations in Two Variables	p. 486: 2,15,16,19,22,29,30,32,36,39,42,80,82,89,90,94
64	6.2 Systems of Equations and Inequalities in Two Variables	p. 504: 17,21,22,24,31,46,47,48,54,59,60,63,65,66,68,78; p. 508: CBC 7
65	Chapter 5 Review	p. 470: 35,41,42,43,44,47,53,54,55,56,59,61,62,70,71,79,82,87,88,95,99
66	Chapter 6 Review	p. 574: 5,8,9,10,17,18,21,22; p. 581: 42,43,44,50b,52ab,54c
67	TEST 5	Sections 5.3,5.4,5.6,5.7,6.1,6.2
68-70	REVIEW FOR FINAL EXAM	

Emergency Evacuation Procedure: A map of this floor is posted near the elevator marking the evacuation route and the **Designated Rescue Area**. This is an area where emergency service personnel will go first to look for individuals who need assistance in exiting the building. Students who may need assistance should identify themselves to the teaching faculty.

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