MAC 1147 (Live)

Student Guide

Spring 2014

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MAC1147 PRECALCULUS: ALGEBRA and TRIGONOMETRY

SYLLABUS (contains book HW, grading scale, etc.)

Spring 2014 (as of 12/30/13 8:00 am)

Contact information:

Course Coordinator

Name: Sherry Tornwall

Office: Little 374

Office Hours: M5, T4, W3

Phone: 352-294-2336

Email: tornwall@ufl.edu Use Sakai mail tool.

Course homepage is on Sakai, http://lss.at.ufl.edu

Discussion Leader (TA)

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Course Lecturer

Name: _____

Office: _____

Office Hours: _____

Phone: _____

Email: _____

MAC1147 (live) – Precalculus: Algebra and Trigonometry

SPRING 2014 – Live MAC1147 Calendar (as of 12/30/13, 7:18 a.m.)

Test 1* (L 1- L8) January 28, 2014, Tuesday 8:30-10 pm
Test 2* ((L 9- L17) February 20, 2014, Thursday 8:30-10 pm
Test 3* ((L 18- L25) March 24, 2014, Monday 8:30-10 pm
Test 4* ((L 26- L33) April 14, 2014, Monday 8:30-10 pm
Cumulative Final* (L1-L36)– April 26, 2014, 3:00 pm Saturday

*See Sakai for test locations.

Monday	Tuesday	Wednesday	Thursday	Friday
Jan 6 L1	**7** First Tuesday discussion class.	**8** L2	**9** First Thursday discussion class.	**10** L3
13 L4 Sakai quizzes due 10 pm	**14** DQ 1 (L1-L3)	**15** L5	**16** DQ 1 (L1-L4)	**17** L6 WA Quiz 1 due 10 pm
20 Holiday-no class	**21** DQ 2 (L4-L6)	**22** L7	**23** DQ 2 (L5-L6)	**24** L8 WA Quiz 2 due 10 pm
27 Review L1-L8	**28 Test 1 tonight** DQ 3 (L7-L8)	**29** L9	**30** HW 1 (L1-L8)	**31** L10 WA Quiz 3 due 10 pm
Feb 3 L11	**4** HW 1 (L1-L8)	**5** L12	**6** DQ 3 (L9-L11)	**7** L13 WA Quiz 4 due 10 pm
10 L14	**11** DQ 4 (L9-L13)	**12** L15	**13** DQ 4 (L12-L14)	**14** L16 WA Quiz 5 due 10 pm
17 L17	**18** DQ 5 (L14-L16)	**19** Review L9-L17	**20 Test 2 tonight** DQ 5 (L15-L17)	**21** L18 WA Quiz 6 due 10 pm
24 L19	**25** HW 2 (L9-L17)	**26** L20	**27** HW 2 (L9-L17)	**28** No class WA Quiz 7 due 10 pm
March 3 Spring Break - no class	**4** Spring Break - no class	**5** Spring Break - no class	**6** Spring Break - no class	**7** Spring Break - no class
10 L21	**11** DQ 6 (L18-L20)	**12** L22	**13** DQ 6 (L18-L21) Self-eval due 10pm	**14** L23 WA Quiz 8 due 10 pm
17 L24	**18** DQ 7 (L21-L23)	**19** L25	**20** DQ 7 (L22-L24)	**21** Review L18-25 WA Quiz 9 due 10 pm
24 L26 **Test 3 tonight**	**25** HW 3 (L18-L25)	**26** L27	**27** HW 3 (L18-L25)	**28** L28 WA Quiz 10 due 10 pm
31 L29	**April 1** DQ 8 (L26-L28)	**2** L30	**3** DQ 8 (L26-L29)	**4** L31 WA Quiz 11 due 10 pm
7 L32	**8** DQ 9 (L29-L31)	**9** L33	**10** DQ 9(L30-L32)	**11*** Review L26-33. WA Quiz 12 due 10 pm
14 L34 **Test 4 tonight**	**15** DQ 10 (L32-33)	**16** L35	**17** DQ 10 (L33-34)	**18 **** L36 WA Quiz 13 due 10 pm
21 Review final L1-L36	**22** No class. All WA HW due 10pm	**23** Review final L1-L36	**24** No class Reading Day	**25** No class Reading Day

Cumulative final is April 26, Saturday 3 pm.

Final grades are available on ISIS on May 7 .

***April 11-last day to drop/withdraw.**

****** All WA HW due Friday 4/18 at 10pm**

2. INTRODUCTION

2.a COURSE CONTENT : College algebra, functions, coordinate geometry, exponential and logarithmic functions, and trigonometry. This **fast-paced course** is designed as a review of algebra and trigonometry to prepare the student for calculus, in particular, MAC2311 Calculus 1 for engineering and science majors.

A minimum grade of C (not C-) in MAC1147 satisfies four hours of the general education requirement and also satisfies the pure math portion of the state Writing/Math requirement. Note: A student can receive at most four credits for taking both MAC1147, and MAC1140 or MAC1114, and at most five credit hours for taking MAC1147, MAC1140, and MAC1114. Students who successfully complete this course (C or better) can advance directly to MAC2311, Analytical Geometry and Calculus 1.

Students who desire a slower pace may take MAC1140 Precalculus Algebra followed by MAC1114 Trigonometry. The sequence of both MAC1140 and MAC1114 covers the same material and uses the same text as the one semester, faster paced course, MAC1147, Precalculus Algebra and Trigonometry.

Students taking this course for general education credit or the pure math portion of the Writing/Math requirement, and who do not need precalculus for their major or as preparation for calculus, might consider taking MGF1106, MGF1107, or MAC1105. For more information on math courses and math advisors go to http://www.math.ufl.edu.

2.b PREREQUISITES: This course assumes prior knowledge of intermediate algebra (Algebra 2) and trigonometry. Students should be able to do arithmetic without a calculator.

MAC1147 begins with a short review of high school algebra topics (appendices A1 – A7). **You should already be competent in working this material.**

2.c REQUIRED MATERIALS: Access (either the e-book or a hardcopy) to the textbook Precalculus with Limits, 9th edition, by Larson and to the online program WebAssign are required. The solutions manual is NOT required. Homework problems from the text will be graded. Online homework and quizzes from WebAssign will count toward your grade. Students will need to **purchase the access code** for the online WebAssign work. Webassign provides a **two week free grace period** to use the online homework system before you must purchase an access code. To use the grace period go to www.webassign.net/ufl/login.html and use your Gatorlink info.

There are several purchase options:

a) Purchase directly from the publisher at

http://www.cengagebrain.com/shop/en/US/storefront/US?cmd=DisplayLandingPage&entityNumber=4462&entryPoint=storefront&cid=1-1MSYIRB&id=60333&messageType=DisplayLandingPage .

$86 = custom UF paperback book, e-book and WebAssign access.
$50 = e-book and WebAssign access.

b) You can purchase the WebAssign access code at a bookstore or elsewhere. You can also purchase the text at a bookstore or elsewhere. Prices vary. Note: The complete edition of the book can be used or the UF Custom edition can be used.

Once you have purchased the WebAssign access code, go to www.webassign.net/ufl/login.html and use your gatorlink to login.

Copies of the book and solutions manual are also available for in-library use at the reserve desk of UF Norman Library and UF Smathers Library West.

2.d E-LEARNING SAKAI: E-Learning Sakai, a free UF tool, is located at http://lss.at.ufl.edu. Use your Gatorlink name and password to login. You can find your grades, announcements, lecture outlines, office hours, free help information, test locations, mail tool, etc. at this site. You are responsible for verifying that your grades are accurate. **You have one week after a score has been posted or the graded paper is handed back to contact your discussion leader if you believe there has been a grading or a recording error.**

2.e LECTURES: The lecture provides the main presentation of course material and will follow as closely as possible the calendar and lecture outline provided in this guide. **Attendance in lecture is required.** You are responsible for learning lecture material missed due to an absence. After each lecture, the completed lecture notes will be available to copy on the door of Little 374, M-F, 8-4:30. The notes will be removed after their corresponding test.

You may print out the outlines for the lecture notes which can be found on Sakai under Course Materials or you can purchase them at Target Copy Center on 1412 West University Avenue for about $15.

2.f DISCUSSION SECTIONS, which meet once a week (either Tuesday or Thursday, depending on the section in which you are registered) give you a valuable opportunity for open discussion of the lecture material and assigned problems in a smaller class setting. A significant portion of the points that determine your grade are earned in discussion class. If necessary, twice during the semester you may attend a different period of your TA's discussion class. Go to www.math.ufl.edu/courses to see when and where your TA teaches.

Your main resource person is your discussion leader, a teaching assistant (TA) in the mathematics department. He or she is available during office hours (or by appointment) to answer your questions about the course material. Your TA is responsible for grading/recording your discussion quizzes, homework, free response on tests, and pop-lecture quizzes. You must retain all returned papers in case of any discrepancy with your course grade. As mentioned above, **you should check Sakai regularly and consult with your discussion leader if you have any questions about recorded grades. All grade concerns must be taken care of within one week of**

receiving the score. Your grade is subject to being raised or lowered if there is a recording error, computational error, bubbling error, "padding" error, etc.

If you have concerns about your discussion class which cannot be handled by your TA, please contact the course coordinator, Mrs. Tornwall, in Little 374, tornwall@ufl.edu (use Sakai email tool).

2.g FREE HELP: In **addition to attending your discussion section regularly and visiting any MAC1147 discussion leader, lecturer, or the course coordinator**, during their office hours, the following aids are available.

- The Teaching Center Math Lab, located at SE Broward Hall, offers free informal tutoring. You may want to attend different hours to find the tutors with whom you feel most comfortable. Go to www.teachingcenter.ufl.edu to find their hours. You can also request free one-on-one tutoring.
- Textbooks and solutions manuals are located at the reserve desks at Norman Hall Library and Smathers Library West.
- Private Tutors: If after availing yourself of these aids, you feel you need more help, you may obtain a list of qualified tutors for hire at www.math.ufl.edu. Search "tutors".
- The Counseling Center has some informative information on developing math confidence. Go to http://www.counseling.ufl.edu/cwc/Developing-Math-Confidence.aspx for information on math confidence and information on joining the Academic Confidence Group.

2.h SUCCESS: Success in MAC1147 depends largely on your attitude and effort. Attendance and participation in class is critical. It is not effective to sit and copy notes without following the thought processes involved in the lecture. For example, you should try to answer the questions posed by your lecturer. Students who actively participate have greater success.

Be aware that much of the learning of mathematics at the university takes place outside of the classroom. You need to spend time reviewing the concepts of each lecture **before** you attempt homework problems. It is also important to spend some time looking over the textbook sections to be covered in the next lecture to become familiar with the vocabulary and main ideas before the next class. That way you will better be able to grasp the material presented by your lecturer. As with most college courses, you should expect to spend a **minimum** of 2 hours working on your own for every hour of classroom instruction.

It can also be very helpful to study with a group. This type of cooperative learning is encouraged, but be sure it leads to a better conceptual understanding. **You must be able to work through the problems on your own.** Even if you work together, **each student must turn in his or her own work, not a copied solution, on any collected individual assignments.**

2.i STUDENTS WITH DISABILITIES: Students requesting classroom accommodation must first register with the Disability Resource Center. The DOS will provide documentation to the student who must then provide this documentation to the course coordinator, Mrs. Tornwall, Little 374, when requesting accommodation.

2.j ACADEMIC HONESTY GUIDELINES: All students are required to abide by the Academic Honesty Guidelines which have been accepted by the University. The academic community of students and faculty at the University of Florida strives to develop, sustain and protect an environment of honesty, trust, and respect. Students are expected to pursue knowledge with integrity. Exhibiting honesty in academic pursuits and reporting violations of the Academic Honesty Guidelines will encourage others to act with integrity. Violations of the Academic Honesty

Guidelines shall result in judicial action and a student being subject to the sanctions in paragraph XIV of the Student Code of Conduct. The conduct set forth hereinafter constitutes a violation of the Academic Honesty Guidelines (University of Florida Rule 6C1-4.017).

3. TESTING: The first four exams are at 8:30 p.m. See the course calendar for the dates. The cumulative final is during finals week. Room locations will be posted on Sakai prior to the exams

3.a Students are responsible for material covered in the lecture notes (including practice problems that we may not have had time to work out during lecture), all assigned book homework problems, and all assigned Webassign material. Sample tests are available from the Teaching Center one week prior to the exam.

3.b You should bring to each test only* the following:

- Your UF Gator One Card.
- Soft lead pencils.
- Knowledge of your section number.

*It is suggested that you do not bring anything of value to the test since you are not allowed to take items such as backpacks to your seat.

NO CALCULATORS ARE PERMITTED. All electronic devices must be put away. This includes phones. Scratch paper and graph paper will be provided.

3.c The Test Form Code, as well as **your UF ID**, name, and section number must be encoded correctly or you will **lose points**. You must also take the test in your assigned test location or you will lose points on your test.

3.d No one will be admitted to the test 20 minutes after the starting time of the test. No one will be permitted to leave the test until 20 minutes after the stated start time.

4. GRADING

4.a COURSE GRADE: The course is based on 500 points accumulated as follows:

Web Tour Quiz on Sakai	1 point (0.2%)
Calendar and Syllabus Quiz on Sakai	2 points (0.4 %)
Contract on Sakai	1 point (0.2%)
Self-Evaluation on Sakai	1 point (0.2%)
Book HWs (3 @ 10 pts, for a max of 20 pts).	20 points (4%)
Discussion Quizzes (best 8 of 10 @ 10pts)	80 points (16%)
Online Webassign HWs (13 @ 2 pts, for a max of 20)	20 points (4%)
Online Webassign Quizzes (best 10 of 13 @ 3 pts)	30 points (6%)
Exams (best 3 of 4 @ 80 pts)	240 points (48%)
Cumulative Final Exam	105 points (21%)

Add your bonus points from the pop-lecture quizzes, then use the scale below to determine your final letter grade. The **course grade is determined by the number of points** you have, **not by the percentage**, and will be strictly enforced.

A = 450-500 points (90%)

A - = 435-449 points (87%)

B+ = 420-434 points (84%)

B = 400-419 points (80%)

B - = 385-399 points (77%)

C+ = 370-384 points (74%)

C = 350-369 points (70%)

C- = 335-349 points (67%)

D+ = 320-334 points (64%)

D = 300-319 points (60%)

D- = 285-299 points (57%)

E = below 285 points

For information on dropping courses and withdrawals go to https://catalog.ufl.edu/ugrad/current/regulations/info/drops.aspx#drop.

For information about UF grades and grading policies go to https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

4.b COURSE INTRODUCTION QUIZZES: The Web Tour Quiz, the Syllabus Quiz, and the Contract Quiz are to make sure you understand what is expected of you in this course. You will find these quizzes on E-Learning Sakai in the Assessment link. These are due at the beginning of the semester.

4.c SELF-EVALUATION QUIZ: The Self-evaluation which is found on the Assessment link in Sakai is after Test 2. Its purpose is to let you know your approximate standing in the class. This quiz is on E-Learning Sakai in the Assessment link. See the calendar for the due date.

4.d BOOK HOMEWORK: The text assignments on page 11 represent the minimum number of problems you should do in each section and serve as a basis for your questions in your discussion section. Homework must be done neatly and work must be shown for credit. You do not need to copy the problem from the book. Homework will be checked for completeness and a few problems will be graded for accuracy. The work should be your own and not copied from the solutions manual. Homework will be collected three times during the semester. See the calendar for collection dates. See section 4h for the make-up policy. Some homework problems suggest the use of a graphing calculator. They are designed to help you visualize important concepts and to reinforce the mathematical processes involved. The use of a calculator when doing homework is not required. **Calculators are not permitted on quizzes nor tests.**

4.e DISCUSSION CLASS QUIZZES will be administered in the discussion section by your discussion leader. Quizzes will be based on the previous lectures and homework assignments. See the calendar for more information. If you feel there is a grading error or posting error on Sakai, you must discuss it with your TA within one week. No aids may be used on the discussion quiz. See section 4h for the make-up policy.

4.f ON-LINE WEBASSIGN HOMEWORK AND QUIZZES: If you purchased a new book, the access code probably came with the book. If you did not purchase a new book then you will need to purchase the access code. See section 2c for information on purchasing the access code. Once you have purchased the code (or want to use the free grace period) go to http://webassign.net/ufl/login.html and use your Gatorlink login and password. See the calendar for the WebAssign due dates**.** You must score a **minimum of 70% on the homework before you can take the quiz**. You have 10 attempts and unlimited time on the homework. You have three attempts and 1.5 hours on the quiz. The online WebAssign quizzes are **due by 10:00 p.m. on Fridays**. DO NOT wait until the last minute to take your quiz, since if you

encounter a computer glitch or if WebAssign is down, you will be out of luck. The **online homework is due on Friday, April 18 at 10:00 p.m.**, thus you may continue working on the homework to improve your grade. The best quiz and HW scores are counted. The WebAssign homework and quizzes are open book and open note. You may have a tutor help you with the homework, but NOT with the quiz.

4.g LECTURE BONUS POINTS: Pop-quizzes will be given in lecture. They are worth two points which will be added to your total points. On these quizzes you may use your book, your notes, work in groups, or get help from the lecturer. To receive credit for these quizzes you must put your TA's name and your section number on your paper. There are no make-ups for the pop-quizzes.

4.h MAKE-UP POLICY: All make-up work must be completed by Monday, April 21 at noon.

i) **Make-up - Exams**: If you have a conflict due to a UF sponsored event or an assembly exam in another course, you need to bring your documentation to Mrs. Tornwall in Little 374 at least one week (otherwise 5 point penalty) before the exam to sign up for the make-up which will be given within one week of the test date. If you miss for any other reason you must notify Mrs. Tornwall within a week of the exam (otherwise 5 point penalty). To be eligible for this make-up you must have received at least half of the lecture bonus points that have been given so far. There is a 10 point penalty for missing the final due to negligence.

If other classes are scheduled during the exam time, University policy states that the assembly exam takes precedence over the evening class and the evening class instructor must provide make-up work and cannot penalize students who miss because of an assembly exam.

ii) **Make-up - Discussion quizzes** : There are no make-ups , unless, **a)** you are participating in a UF sponsored event, for which you must bring your documentation at least one week prior to Mrs. Tornwall. **b)** you miss at least three discussion quizzes for which you have valid, documentable reasons for your absences. You will be allowed to make up the excused absences that are in excess of two. To be eligible for a make-up you must have received credit for at least half of the bonus points. Bring your documentation to Mrs. Tornwall in Little 374 within one week of your third discussion quiz absence. **c)** you miss because of a religious holiday. You must notify Mrs. Tornwall within the first three weeks of class if you will be missing discussion class due to a religious holiday. **d)** you miss because of a court-ordered obligation – see Mrs. Tornwall.

iii) **Make-up – Homework collection:** If you are absent on a collection day, you have one week to bring all the lectures listed on the calendar to your TA during his/her office hours (four-point penalty incurred). If you are participating in a UF sponsored event, you must bring your documentation at least one week prior to Mrs. Tornwall to avoid the four-point penalty.

iv) **Make-up WebAssign, pop-lecture quizzes:** There are no make-ups.

4.i INCOMPLETE: A grade of I (incomplete) will be considered only if you meet the Math Department criteria which is found at www.math.ufl.edu. If you meet the criteria you must see Mrs. Tornwall before finals week to be considered for an I. An I only allows you to make up your incomplete work, not redo your work.

5. INSTRUCTOR EVALUATIONS: Students are asked to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results.

6.Textbook homework assignments:

MAC 1147 Book HW Assignments

You should read the textbook sections covered in each day's lecture before class. After each lecture, review your notes and the text to make sure you understand the main ideas prior to working the exercises.

If you have questions about the reading or homework exercises, you may ask your discussion leader in discussion class and during office hours, or you may ask your lecturer before or after lecture and during office hours. Tutoring is also available in the SE Broward math lab.

You should complete each assignment **before** your next lecture class, since the material in each new lecture builds on previous concepts.

L1 Real Numbers, Reading: Student Guide, Appendix A.1

Exercises (A.1), page A11: 6, 7, 9, 12, 16, 17, 19, 25, 27, 35, 39, 40, 43, 50, 53, 55, 61, 65,72, 73, 80.

L2 Exponents and Radicals, Reading: Appendix A.2

Exercises (A.2), page A23: 1, 4, 6, 7, 8, 13, 14, 19, 20, 26, 29, 41, 44, 50, 52, 56, 58, 60, 62, 64, 65, 72, 74, 75, 78, 81, 84.

Additional HW: Simplify the radical expression: $\sqrt[3]{81x^7y^2} \cdot \sqrt[3]{36x^2y^2}$

L3 Polynomials and Factoring, Reading: Appendix A.3

Exercises (A.3), page A33: 1, 2, 15, 19, 21, 23, 33, 35, 37, 39, 43, 45, 47, 52, 56, 61, 69, 76, 79, 89, 94, 103, 104, 107.

L4 Rational Expressions, Reading: Appendix A.4

Exercises (A.4), page A42: 1, 2, 3, 4, 7, 12, 16, 22, 30, 35, 39, 44, 51, 54, 56, 60, 62, 66, 70, 78, 79, 81, 82.

L5 Solving Equations, Reading: Appendix A.5

Exercises (A.5), page A56: 1, 3, 4, 10, 14, 19, 21, 26, 34, 38, 40, 42, 44, 50, 63, 70, 76, 78, 80, 84, 85, 86, 90, 92, 95, 100.

Additional HW: Find all real solutions and check your answers:

1. $6x^{-2}+x^{-1}=2$.
2. $8(m-4)^4-10(m-4)^2+3=0$.
3. $(y+3)^{\frac{2}{3}}-2(y+3)^{\frac{1}{3}}-3=0$.
4. $4(x+1)^{\frac{1}{2}}-5(x+1)^{\frac{3}{2}}+(x+1)^{\frac{5}{2}}=0$.
5. $\frac{1}{x-3}+\frac{3}{x+3}=\frac{6x}{x^2-9}$.
6. $\frac{x^2-9}{x^2-2x-3}=\frac{3}{2}$.
7. $x^8-4x^4-5=0$
8. $3x^4+10x^2-25=0$.
9. $\sqrt{x+7}+3=\sqrt{x-4}$.
10. $2x=1-\sqrt{2-x}$ More on the next page.
11. $x=\sqrt{15-2x}$
12. $\left(5x^2-6\right)^{1/4}=x$
13. $\sqrt[3]{4x+3}=\sqrt[3]{2x-1}$
14. $(2x-1)^{2/3}=x^{1/3}$
15. $\sqrt{x}-(3)\sqrt[4]{x}-4=0$
16. $x^{\frac{1}{2}}+3x^{-\frac{1}{2}}=10x^{-\frac{3}{2}}$

17, Factor $x^6-2x^4+x^2$ completely and find all the real solutions of the equation

$x^6-2x^4+x^2=0$.

L6 Linear Inequalities and Algebraic Errors, Reading: Appendices A.6 and A.7

Exercises (A.6), page A64: 4, 7, 9, 15, 28, 38, 40, 53, 54, 58, 69, 76, 78, 81, 82, 83, 85, 87, 89, 91, 94, 95, 98, 102, 103, 109.

Exercises (A.7), page A2: 15, 16, 22, 26, 31, 33, 43, 49, 55, 64, 67, 72.

L7 Rectangular Coordinates and Graphs, Reading: Sections 1.1 and 1.2

Exercises (1.1), page 8: 1, 2, 3, 4, 14, 24, 32, 45, 51, 54, 56, 58.

Exercises (1.2), page 19: 3, 4, 5, 10, 26, 28, 29, 31, 34, 38, 43, 47, 48, 71, 74, 76, 79, 90.

Additional HW:

1. Find the equation of a circle in standard form with center at the point $(-3,2)$ and tangent to the line (touching the line) $y=4$.

2. Given the circle $x^2+(y+1)^2-1=8$, find its center, radius and intercepts.

(Hint: Sketch the graph.)

L8 Linear Equations and Functions, Reading: Sections 1.3 and 1.4

Exercises (1.3), page 31: 1, 2, 3, 4, 5, 6, 9, 11, 14, 19, 23, 30, 39, 45, 51, 53, 55, 65, 67, 70, 74, 87, 89, 90,91, 93, 94, 96, 99, 101, 102, 103, 104, 105, 112.

Exercises (1.4), page 44: 1, 2, 4, 7, 11, 12, 24, 29, 32, 36, 40, 47, 48, 57, 58, 59, 61, 63, 64, 68, 71, 73, 78, 82, 85,86, 86, 88, 89, 90, 93, 97.

L9 Analyzing Graphs of Functions, Reading: Section 1.5

Exercises (1.5), page 56: 1, 2, 3, 4, 5, 6, 7, 9, 11, 13, 18, 20, 23, 33, 37, 55, 56, 64, 66, 71, 72, 73, 83, 85, 88a, 93, 94, 95, 96, 98.

L10 A Library of Functions and Transformations of Functions , Reading: Sections 1.6 and 1.7

Exercises (1.6), page 65: 2, 3, 4, 5, 6, 7, 8. 9, 10, 12, 35, 36, 39, 43, 48, 49, 50.

Exercises (1.7), page 72: 1, 2, 3, 4, 5, 9, 11, 13, 14, 15, 16, 17, 19, 20, 21, 23, 25, 27, 29, 31, 33, 39, 47, 50, 51, 53, 55, 57, 71, 73, 74, 75, 76, 78, 80.

L11 Combinations of Functions , Reading: Section 1.8

Exercises (1.8), page 81: 3, 9, 13, 17, 18, 23, 25, 31, 34, 35, 37, 42, 43, 45, 51, 55, 59, 60, 61.

L12 Inverse Functions , Reading: Section 1.9

Exercises (1.9), page 90: 1, 2, 3, 4, 5, 6, 14, 19, 21, 27, 29, 33, 35, 37, 39, 45, 49, 50, 57, 61, 63, 64, 65, 70, 73, 76, 79, 84, 86, 88, 92, 93, 95, 96, 97, 101.

L13 Quadratic Functions , Reading: Section 2.1

Exercises (2.1), page 120: 3, 5, 6, 7, 9, 11, 15, 22, 32, 43, 44, 48, 50, 58, 68, 74, 75, 76, 77, 80, 83, 87, 88, 89, 90, 92.

L14 Polynomial Functions of Higher Degree and Division of Polynomials, Reading: Sections 2.2 and 2.3

Exercises (2.2), page 133: 1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15, 17, 19, 21, 23, 27, 29, 61, 63, 65, 69, 71, 76, 78, 80, 82, 85, 87, 97a, b, 100a, b, 105, 107, 108, 109. 110, 111, 112, 113, 115.

Exercises (2.3), page 144: 2, 3, 4, 5, 6, 8, 12, 24, 34, 38, 48, 55, 60, 67, 68, 84, 87, 90, 92, 95, 97.

L15 Complex Numbers , Reading: Section 2.4

Exercises (2.4), page 152: 1, 2, 3, 4, 5, 6, 7, 9, 13, 17, 19, 25, 27, 36, 38, 42, 45, 47, 49, 51, 56, 60, 64, 65, 67, 69, 72, 81, 85, 87, 93, 94, 96, 97, 99.

L16 Zeros of Polynomial Functions, Reading: Sections 2.5 and 2.6

Exercises (2.5), page:

Exercises (2.6), page:

L17 Rational Functions , Reading: Section 2.6

Exercises (2.6), page:

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