**Created June 2018 *Please note that this is a copy and therefore has not been updated since its creation date. If you find a link issue or typo here, please check the actual course before bringing it to our attention. Thank you.***

## Calculus

**Please review the FAQs and contact us if you find a problem.**
**Credit**: 1
**Prerequisites**: Trigonometry/Pre-Calculus
**Test Prep**: CLEP, AP Calculus BC  Note: If you are planning on taking the AP exam, please realize that it will cover things at the very end of the course. Plan your timing so that you will know that material before you take the test.
**Course Description**: This introductory calculus course covers differentiation and integration of functions of one variable, with applications. It is built from MIT's Open Courseware Calculus course. Students will be using a traditional textbook for this course along with a study guide. There are optional video lectures for students who prefer to learn by listening. There is a midterm and final, but the goal that is emphasized is the daily understanding of the information in the given lesson. Students are rewarded for going back and figuring out any problems they got wrong in any given assignment. For a complete list of topics covered see lessons 1.1 through 10.4.
**Notes**: You will be able to use a graphing calculator in this course. On the AP exam you are able to use a calculator on part of the exam as well. If you don't have one, here's a free online graphing calculator you can use. When you need graph paper, you can print graph paper from here. In your assignments, if a problem you need to do refers to another problem, you will have to do that as well. When you are checking your answers sometimes an answer will vary; you will count your answer as correct if you found an answer. If you are stuck, here's a site that might be able to help you solve an equation.

**Day 1 (*)**

1. (*) Print out the first quarter or use the Excel version.
2. Read section 1.1, Velocity and Distance. Chapter 1.1 – 1.4
3. Use the study guide for chapter 1 along with the reading.
4. There's an outline of the lesson right under where it says "Exercises 1.1." Every section has this. Try to fill in the blanks from the reading.

**Day 2**

1. Use section 1.1 again and answer questions (the multiples of 3 up to 45). Chapter 1.1 – 1.4
2. Check your answers for the chapter outline with the blanks filled in. That info is the most important "take away" for each chapter. Work to understand that section each time.

**Day 3**

1. Use section 1.1 to check all of your answers. Chapter 1.1 – 1.4
2. Figure out your mistakes and work on other problems and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer. (This is always referring to the problems you did on the day before and then worked on again if necessary.)

**Day 4**

1. Read section 1.2, Calculus without Limits. Chapter 1.1 – 1.4
2. Use the study guide for chapter 1 along with the reading.
3. There's an outline of the lesson right under where it says "Exercises 1.2." Try to fill in the blanks from the reading.

**Day 5**

1. Use section 1.2 again and answer the questions (the multiples of 3 up to 45). Chapter 1.1 – 1.4
2. Check your answers for the chapter outline with the blanks filled in.

**Day 6**

1. Use section 1.2 to check your answers. Chapter 1.1 – 1.4
2. Figure out your mistakes and work on other questions and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 7**

1. Read section 1.3, Velocity and Distance. Chapter 1.1 – 1.4
2. Use the study guide for chapter 1 along with the reading.
3. Complete the "Read-Through Questions" at the end of the section. Fill in the blanks from the reading.

**Day 8**

1. Use section 1.3 again and answer questions (the multiples of 3 up to 27). There's a link to print graph paper at the top of the course in the "Notes" section. Chapter 1.1 – 1.4
2. Check your answers for the chapter outline.

**Day 9**

1. Use section 1.3 to check all of your answers. Chapter 1.1 – 1.4
2. Figure out your mistakes and work on other problems and check your answers. Spend 40 minutes working.

3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 10**

1. Read section 1.4, Circular Motion. Chapter 1.1 – 1.4
2. Use the study guide for chapter 1 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 11**

1. Use section 1.4 again and answer the questions (the multiples of 3 up to 39). Chapter 1.1 – 1.4
2. Check your answers for the chapter outline.

**Day 12**

1. Use section 1.4 to check your answers. Chapter 1.1 – 1.4
2. Figure out your mistakes and work on other questions and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 13**

1. Read section 1.5, Circular Motion. Chapter 1.5 – 1.7
2. Use the study guide for chapter 1 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 14**

1. Use section 1.5 again and answer the questions (the multiples of 3 up to 36). Chapter 1.5 – 1.7
2. Check your answers for the chapter outline.

**Day 15**

1. Use section 1.5 to check your answers. Chapter 1.5 – 1.7
2. Do question 37. Figure out your mistakes from Day 14 and work on other questions and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 16**

1. Read sections 1.6 and 1.7. Chapter 1.5 – 1.7

**Day 17**

1. Practice with your graphing calculator or with an online option. See "Notes" at the top of the page.

**Day 18**

1. Read section 2.1, The Derivative of a Function. Chapter 2.1 – 2.4
2. Use the study guide for chapter 2 along with the reading.
3. Fill in the blanks in the “Read-Through Questions” section.

**Day 19**

1. Use section 2.1 again and answer the questions (the multiples of 3 up to 39). Chapter 2.1 – 2.4
2. Check your answers for the chapter outline.

**Day 20**

1. Use section 2.1 to check your answers. Chapter 2.1 – 2.4
2. Figure out your mistakes from Day 19 and work on other questions and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can’t figure out the right answer.

**Day 21**

1. Read section 2.2, Powers and Polynomials. Chapter 2.1 – 2.4
2. Use the study guide for chapter 2 along with the reading.
3. Fill in the blanks in the “Read-Through Questions” section.

**Day 22**

1. Use section 2.2 again and answer the questions (the multiples of 3 up to 42). Chapter 2.1 – 2.4
2. Check your answers for the chapter outline.

**Day 23**

1. Use section 2.2 to check your answers. Chapter 2.1 – 2.4
2. Do number 49. Check your answer.
3. Figure out your mistakes from Day 22 and work on other questions and check your answers. Spend 40 minutes working.
4. Record your score out of 10. Subtract one point for every problem you can’t figure out the right answer.

**Day 24**

1. Read section 2.3, The Slope and the Tangent Line. Chapter 2.1 – 2.4
2. Use the study guide for chapter 2 along with the reading.
3. Fill in the blanks in the “Read-Through Questions” section.

**Day 25**

1. Use section 2.3 again and answer the questions (the multiples of 3 up to 39). Chapter 2.1 – 2.4
2. Check your answers for the chapter outline.

**Day 26**

1. Use section 2.3 to check your answers. Chapter 2.1 – 2.4
2. Do number 45. Check your answer.
3. Figure out your mistakes from Day 25 and work on other questions and check your answers. Spend 40 minutes working.
4. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 27**

1. Here's something different today. Watch this calculus class given at MIT.
2. Decide if you want to watch more of these lectures. Decide if it's profitable to you. Do you learn more easily when you hear it and see it explained instead of reading it?
3. I don't have the time to put these classes on a separate day. I will link to them though, and you can use them if they are helpful to you.

**Day 28**

1. Read section 2.4, Derivative of the Sine and Cosine. Chapter 2.1 – 2.4
2. Use the study guide for chapter 2 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 29**

1. Use section 2.4 again and answer the questions (the multiples of 3 up to 30). Chapter 2.1 – 2.4
2. Check your answers for the chapter outline.

**Day 30**

1. Use section 2.4 to check your answers. Chapter 2.1 – 2.4
2. Do number 33.
3. Figure out your mistakes from Day 29 and work on other questions and check your answers. Spend 40 minutes working. (If you find it more helpful, you could use the video of lecture 3 instead for today's lesson .)
4. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 31**

1. Read section 2.5, The Product and Quotient and Power Rules. Chapter 2.5 – 2.7
2. Use the study guide for chapter 2 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 32**

1. Use section 2.5 again and answer the questions (the multiples of 3 up to 45). Chapter 2.5 – 2.7
2. Check your answers for the chapter outline.

**Day 33**

1. Use section 2.5 to check your answers. Chapter 2.5 – 2.7
2. Figure out your mistakes from Day 32 and work on other questions and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 34**

1. Read section 2.6, Limits. Chapter 2.5 – 2.7
2. Use the study guide for chapter 2 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 35**

1. Use section 2.6 again and answer the questions (the multiples of 3 up to 42). Chapter 2.5 – 2.7
2. Check your answers for the chapter outline.

**Day 36**

1. Use section 2.6 to check your answers. Chapter 2.5 – 2.7
2. Do number 45. Check your answer.
3. Figure out your mistakes from Day 35 and work on other questions and check your answers. Spend 40 minutes working.
    1. Or, you can watch lecture 2.
1. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 37**

1. Read section 2.7, Continuous Functions. Chapter 2.5 – 2.7
2. Use the study guide for chapter 2 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 38**

1. Use section 2.7 again and answer the questions (the multiples of 3 up to 39). Chapter 2.5 – 2.7
2. Check your answers for the chapter outline.

**Day 39**

1. Use section 2.7 to check your answers. Chapter 2.5 – 2.7
2. Do number 42. Check your answer.

3. Figure out your mistakes from Day 38 and work on other questions and check your answers. Spend 40 minutes working.
4. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 40**

1. Read section 3.1, Linear Approximation. Chapter 3.1 – 3.4
2. Use the study guide for chapter 3 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 41**

1. Use section 3.1 again and answer the questions (the multiples of 3 up to 24, and 29-31). Chapter 3.1 – 3.4
2. Check your answers for the chapter outline.

**Day 42**

1. Use section 3.1 to check your answers. Chapter 3.1 – 3.4
2. Figure out your mistakes from Day 41 and work on other questions and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 43**

1. Read section 3.2, Maximum and Minimum Problems. Chapter 3.1 – 3.4
2. Use the study guide for chapter 3 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 44**

1. Use section 3.2 again and answer the questions (the multiples of 3 up to 60). Chapter 3.1 – 3.4
2. Check your answers for the chapter outline.

**Day 45**

1. Use section 3.2 to check your answers. Chapter 3.1 – 3.4
2. Figure out your mistakes from Day 44 and work on other questions and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.
4. Calculate your grade for this quarter. Save your work.

**Day 46 (*)**

1. (*)Print out your second quarter grading sheet or use the Excel version.
2. Read section 3.3, Second Derivatives: Minimum vs. Maximum. Chapter 3.1 – 3.4

3. Use the study guide for chapter 3 along with the reading.
4. Fill in the blanks in the “Read-Through Questions” section.

**Day 47**

1. Use section 3.3 again and answer the questions (the multiples of 3 up to 42). Chapter 3.1 – 3.4
2. Check your answers for the chapter outline.

**Day 48**

1. Use section 3.3 to check your answers. Chapter 3.1 – 3.4
2. Figure out your mistakes from Day 47 and work on other questions and check your answers. Spend 40 minutes working. You could choose to spend your time today watching lecture 4.
3. Record your score out of 10. Subtract one point for every problem you can’t figure out the right answer.

**Day 49**

1. Read section 3.4, Graphs. Chapter 3.1 – 3.4
2. Use the study guide for chapter 3 along with the reading.
3. Fill in the blanks in the “Read-Through Questions” section.

**Day 50**

1. Use section 3.4 again and answer the questions (the multiples of 3 up to 51). Chapter 3.1 – 3.4
2. Check your answers for the chapter outline.

**Day 51**

1. Use section 3.4 to check your answers. Chapter 3.1 – 3.4
2. Figure out your mistakes from Day 50 and work on other questions and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can’t figure out the right answer.

**Day 52**

1. Read section 3.5, Ellipses, Parabolas, and Hyperbolas. Chapter 3.5 – 3.8
2. Use the study guide for chapter 3 along with the reading.
3. Fill in the blanks in the “Read-Through Questions” section.

**Day 53**

1. Use section 3.5 again and answer the questions (the multiples of 3 up to 42). Chapter 3.5 – 3.8
2. Check your answers for the chapter outline.

**Day 54**

1. Use section 3.5 to check your answers. Chapter 3.5 – 3.8
2. Figure out your mistakes from Day 53 and work on other questions and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 55**

1. Read section 3.6, Iterations x[n+1] = F(x[n]). Chapter 3.5 – 3.8
2. Use the study guide for chapter 3 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 56**

1. Use section 3.6 again and answer the questions (the multiples of 3 up to 36). Chapter 3.5 – 3.8
2. Check your answers for the chapter outline.

**Day 57**

1. Use section 3.6 to check your answers. Chapter 3.5 – 3.8
2. Do number 42 and check your answer.
3. Figure out your mistakes from Day 56 and work on other questions and check your answers. Spend 40 minutes working.
4. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 58**

1. Read section 3.7, Newton's Method and Chaos. Chapter 3.5 – 3.8
2. Use the study guide for chapter 3 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 59**

1. Use section 3.7 again and answer the questions (the multiples of 3 up to 42). Chapter 3.5 – 3.8
2. Check your answers for the chapter outline.

**Day 60**

1. Use section 3.7 to check your answers. Chapter 3.5 – 3.8
2. Do number 45 and check your answer.
3. Figure out your mistakes from Day 59 and work on other questions and check your answers. Spend 40 minutes working.
4. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer (as always, from the original problem set only).

**Day 61**

1. Read section 3.8, The Mean Value Theorem and l'Hopital's Rule. Chapter 3.5 – 3.8
2. Use the study guide for chapter 3 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 62**

1. Use section 3.8 again and answer the questions (the multiples of 3 up to 36). Chapter 3.5 – 3.8
2. Check your answers for the chapter outline.

**Day 63**

1. Use section 3.8 to check your answers. Chapter 3.5 – 3.8
2. Figure out your mistakes from Day 62 and work on other questions and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 64**

1. Read section 4.1, Derivatives by the Chain Rule. Chapter 4.1 – 4.2
2. Use the study guide for chapter 4 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 65**

1. Use section 4.1 again and answer the questions (the multiples of 3 from 1 to 30 and 42 – 57). Chapter 4.1 – 4.2
2. Check your answers for the chapter outline.

**Day 66**

1. Use section 4.1 to check your answers. Chapter 4.1 – 4.2
2. Do numbers 36 and 39 and check your answers.
3. Figure out your mistakes from Day 65 and work on other questions and check your answers. Spend 40 minutes working.
4. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer. (This, as always, refers only to the first set of problems you did, the ones from Day 65.)

**Day 67**

1. Read section 4.2, Implicit Differentiation and Related Rates. Chapter 4.1 – 4.2
2. Use the study guide for chapter 4 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 68**

1. Use section 4.2 again and answer the questions (the multiples of 3 from 1 to 27). Chapter 4.1 – 4.2
2. Check your answers for the chapter outline.

**Day 69**

1. Use section 4.2 to check your answers. Chapter 4.1 – 4.2
2. Figure out your mistakes from Day 68 and work on other questions and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 70**

1. Read section 4.3, Inverse Functions and Their Derivatives. Chapter 4.3-4.4
2. Use the study guide for chapter 4 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 71**

1. Use section 4.3 again and answer the questions (the multiples of 3 to 42, and do number 48). Chapter 4.3-4.4
2. Check your answers for the chapter outline.

**Day 72**

1. Use section 4.3 to check your answers. Chapter 4.3-4.4
2. Do number 59 and check your answers.
3. Figure out your mistakes from Day 71 and work on other questions and check your answers. Spend 40 minutes working.
4. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 73**

1. Read section 4.4, Inverses of Trigonometric Functions. Chapter 4.3-4.4
2. Use the study guide for chapter 4 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 74**

1. Use section 4.4 again and answer the questions (the multiples of 3 to 45, and do number 50). Chapter 4.3-4.4
2. Check your answers for the chapter outline.

**Day 75**

1. Use section 4.4 to check your answers. Chapter 4.3-4.4

2. Figure out your mistakes from Day 74 and work on other questions and check your answers. Spend 40 minutes working. You could decide it would be better to watch the lecture on inverses, lecture 5.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.
4. On Day 91 you will have a midterm exam on questions you have been assigned from the beginning up through section 5.4. The test will be made up of only problems you have already been assigned.

**Day 76**

1. Read section 5.1, The Idea of an Integral. Chapter 5.1 – 5.4
2. Use the study guide for chapter 5 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 77**

1. Use section 5.1 again and answer the questions (the multiples of 3 to 24). Chapter 5.1 – 5.4
2. Check your answers for the chapter outline.

**Day 78**

1. Use section 5.1 to check your answers. Chapter 5.1 – 5.4
2. Figure out your mistakes from Day 77 and work on other questions and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 79**

1. Read section 5.2, Antiderivatives. Chapter 5.1 – 5.4
2. Use the study guide for chapter 5 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 80**

1. Use section 5.2 again and answer the questions (the multiples of 3 to 33). Chapter 5.1 – 5.4
2. Check your answers for the chapter outline.

**Day 81**

1. Use section 5.2 to check your answers. Chapter 5.1 – 5.4
2. Figure out your mistakes from Day 80 and work on other questions and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 82**

1. Read section 5.3, Summation vs. Integration. Chapter 5.1 – 5.4
2. Use the study guide for chapter 5 along with the reading.
3. Fill in the blanks in the “Read-Through Questions” section.

**Day 83**

1. Use section 5.3 again and answer the questions (the multiples of 3 to 30). Chapter 5.1-5.4
2. Check your answers for the chapter outline.

**Day 84**

1. Use section 5.3 to check your answers. Chapter 5.1 – 5.4
2. Do number 33 and check your answer.
3. Figure out your mistakes from Day 83 and work on other questions and check your answers. Spend 40 minutes working.
4. Record your score out of 10. Subtract one point for every problem you can’t figure out the right answer.

**Day 85**

1. Read section 5.4, Indefinite Integrals and Substitutions. Chapter 5.1 – 5.4
2. Use the study guide for chapter 5 along with the reading.
3. Fill in the blanks in the “Read-Through Questions” section.

**Day 86**

1. Use section 5.4 again and answer the questions (the multiples of 3 to 36). Chapter 5.1 – 5.4
2. Check your answers for the chapter outline.

**Day 87**

1. Use section 5.4 to check your answers. Chapter 5.1 – 5.4
2. Figure out your mistakes from Day 86 and work on other questions and check your answers. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can’t figure out the right answer.
4. On Day 91 you will be tested on problems you have been assigned up to this point. (All of the questions will be from your normally assigned work, not from any extra problems given you.) You need to keep moving on your coursework, but you can also take some time to look over your work to prepare.

**Day 88**

1. Read section 5.5, The Definite Integral. Chapter 5.5 – 5.8
2. Use the study guide for chapter 5 along with the reading.
3. Fill in the blanks in the “Read-Through Questions” section.

**Day 89**

1. Use section 5.5 again and answer the questions (the multiples of 3 to 33). Chapter 5.5 – 5.8
2. Check your answers for the chapter outline.

**Day 90**

1. Use section 5.5 to check your answers. Chapter 5.5 – 5.8
2. Figure out your mistakes from Day 89 and go over your assigned work from the course to prepare for your midterm. You could do a problem from each section for practice.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.
4. Day 91 is a midterm on Chapters 1 through 5.4.
5. Calculate your grade for this quarter.

**Day 91** (*)

1. (*)Print out your third quarter grading sheet or use the Excel version.
2. Take your Calculus Midterm.
3. Check your answers. You may award partial credit. Add 1 to your score and record it.

**Day 92**

1. Read section 5.6, Properties of the Integral and the Average Value. Chapter 5.5 – 5.8
2. Use the study guide for chapter 5 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 93**

1. Use section 5.6 again and answer the questions (the multiples of 3 to 36). Chapter 5.5 – 5.8
2. Check your answers for the chapter outline.

**Day 94**

1. Use section 5.6 to check your answers. Chapter 5.5 – 5.8
2. Start the one minute timer and do number 39.
3. Figure out your mistakes from Day 93 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
4. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 95**

1. Read section 5.7, The Fundamental Theorem and Its Consequences. Chapter 5.5 – 5.8
2. Use the study guide for chapter 5 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 96**

1. Use section 5.7 again and answer the questions (the multiples of 3 to 36). Chapter 5.5 – 5.8
2. Check your answers for the chapter outline.

**Day 97**

1. Use section 5.7 to check your answers. Chapter 5.5 – 5.8
2. Figure out your mistakes from Day 96 and work on other problems from the section for practice. Keep checking your answers as you go.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 98**

1. Read section 5.8, Numerical Integration. Chapter 5.5 – 5.8
2. Use the study guide for chapter 5 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 99**

1. Use section 5.8 again and answer the questions (the multiples of 3 to 27). Chapter 5.5 – 5.8
2. Check your answers for the chapter outline.

**Day 100**

1. Use section 5.8 to check your answers. Chapter 5.5 – 5.8
2. Figure out your mistakes from Day 99 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 101**

1. Read section 6.1, An Overview. Chapter 6.1 – 6.4
2. Use the study guide for chapter 6 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 102**

1. Use section 6.1 again and answer the questions (the multiples of 3 to 27). Chapter 6.1 – 6.4
2. Check your answers for the chapter outline.

**Day 103**

1. Use section 6.1 to check your answers. Chapter 6.1 – 6.4
2. Figure out your mistakes from Day 102 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.

3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 104**

1. Read section 6.2, The Exponential e^x. Chapter 6.1 – 6.4
2. Use the study guide for chapter 6 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 105**

1. Use section 6.2 again and answer the questions (the multiples of 3 to 48). Chapter 6.1 – 6.4
2. Check your answers for the chapter outline.

**Day 106**

1. Use section 6.2 to check your answers. Chapter 6.1 – 6.4
2. Figure out your mistakes from Day 105 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 107**

1. Read section 6.3, The Exponential e^x. Chapter 6.1 – 6.4
2. Use the study guide for chapter 6 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 108**

1. Use section 6.3 again and answer the questions (the multiples of 3 to 51). Chapter 6.1 – 6.4
2. Check your answers for the chapter outline.

**Day 109**

1. Use section 6.3 to check your answers. Chapter 6.1 – 6.4
2. Do number 66 and check your answer.
3. Figure out your mistakes from Day 108 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
4. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 110**

1. Read section 6.4, Logarithms. Chapter 6.1 – 6.4
2. Use the study guide for chapter 6 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 111**

1. Use section 6.4 again and answer the questions (the multiples of 3 to 66). Chapter 6.1 – 6.4
2. Check your answers for the chapter outline.

**Day 112**

1. Use section 6.4 to check your answers. Chapter 6.1 – 6.4
2. Figure out your mistakes from Day 111 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 113**

1. Read section 6.5, Separable Equations Including the Logistic Equation. Chapter 6.5 – 6.7
2. Use the study guide for chapter 6 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 114**

1. Use section 6.5 again and answer the questions (the multiples of 3 to 33). Chapter 6.5 – 6.7
2. Check your answers for the chapter outline.

**Day 115**

1. Use section 6.5 to check your answers. Chapter 6.5 – 6.7
2. Figure out your mistakes from Day 114 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 116**

1. Read section 6.6, Powers Instead of Exponentials. Chapter 6.5 – 6.7
2. Use the study guide for chapter 6 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 117**

1. Use section 6.6 again and answer the questions (the multiples of 3 to 39). Chapter 6.5 – 6.7
2. Check your answers for the chapter outline.

**Day 118**

1. Use section 6.6 to check your answers. Chapter 6.5 – 6.7

2. Figure out your mistakes from Day 117 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 119**

1. Read section 6.7, Hyperbolic Functions. Chapter 6.5 – 6.7
2. Use the study guide for chapter 6 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 120**

1. Use section 6.7 again and answer the questions (the multiples of 3 to 54). Chapter 6.5 – 6.7
2. Check your answers for the chapter outline.

**Day 121**

1. Use section 6.7 to check your answers. Chapter 6.5 – 6.7
2. Figure out your mistakes from Day 120 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working. Or, you might want to watch lecture 6.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 122**

1. Read section 7.1, Integration by Parts. Chapter 7.1 – 7.3
2. Use the study guide for chapter 7 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 123**

1. Use section 7.1 again and answer the questions (the multiples of 3 to 54). Chapter 7.1 – 7.3
2. Check your answers for the chapter outline.

**Day 124**

1. Use section 7.1 to check your answers. Chapter 7.1 – 7.3
2. Figure out your mistakes from Day 123 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 125**

1. Read section 7.2, Trigonometric Integrals. Chapter 7.1 – 7.3
2. Use the study guide for chapter 7 along with the reading.

3. Fill in the blanks in the “Read-Through Questions” section.

**Day 126**

1. Use section 7.2 again and answer the questions (the multiples of 3 to 54). Chapter 7.1 – 7.3
2. Check your answers for the chapter outline.

**Day 127**

1. Use section 7.2 to check your answers. Chapter 7.1 – 7.3
2. Figure out your mistakes from Day 126 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can’t figure out the right answer.

**Day 128**

1. Read section 7.3, Trigonometric Substitutions. Chapter 7.1 – 7.3
2. Use the study guide for chapter 7 along with the reading.
3. Fill in the blanks in the “Read-Through Questions” section.

**Day 129**

1. Use section 7.3 again and answer the questions (the multiples of 3 to 48). Chapter 7.1 – 7.3
2. Check your answers for the chapter outline.

**Day 130**

1. Use section 7.3 to check your answers. Chapter 7.1 – 7.3
2. Do number 54 and check your answer.
3. Figure out your mistakes from Day 129 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
4. Record your score out of 10. Subtract one point for every problem you can’t figure out the right answer.

**Day 131**

1. Read section 7.4, Partial Fractions. Chapter 7.4 – 7.5
2. Use the study guide for chapter 7 along with the reading.
3. Fill in the blanks in the “Read-Through Questions” section.

**Day 132**

1. Use section 7.4 again and answer the questions (the multiples of 3 to 27). Chapter 7.4-7.5
2. Check your answers for the chapter outline.

**Day 133**

1. Use section 7.4 to check your answers. Chapter 7.4 – 7.5
2. Figure out your mistakes from Day 132 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working. Or, you might decide to watch video lecture 29 on partial fractions.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 134**

1. Read section 7.5, Improper Integrals. Chapter 7.4 – 7.5
2. Use the study guide for chapter 7 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 135**

1. Use section 7.5 again and answer the questions (the multiples of 3 to 27, and do number 29). Chapter 7.4 – 7.5
2. Check your answers for the chapter outline.
3. Calculate your grade for this quarter. Save your work.

**Day 136** (*)

1. (*) Print out your fourth quarter grading sheet or use the Excel version.
2. Use section 7.5 to check your answers. Chapter 7.4 – 7.5
3. Figure out your mistakes from Day 135 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working. Or, you might want to watch a video lecture on integration.
4. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 137**

1. Read section 8.1, Areas and Volumes by Slices. Chapter 8.1 – 8.3
2. Use the study guide for Chapter 8 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 138**

1. Use section 8.1 again and answer the questions (the multiples of 3 to 57). Chapter 8.1 – 8.3
2. Check your answers for the chapter outline.

**Day 139**

1. Use section 8.1 to check your answers. Chapter 8.1 – 8.3
2. Do number 69 and check your answer.
3. Figure out your mistakes from Day 138 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.

4. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 140**

1. Read section 8.2, Length of a Plane Curve. Chapter 8.1 – 8.3
2. Use the study guide for Chapter 8 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 141**

1. Use section 8.2 again and answer the questions (the multiples of 3 to 30). Chapter 8.1 – 8.3
2. Check your answers for the chapter outline.

**Day 142**

1. Use section 8.2 to check your answers. Chapter 8.1 – 8.3
2. Figure out your mistakes from Day 141 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working. Or you might want to watch video lecture 31.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 143**

1. Read section 8.3, Area of a Surface of Revolution. Chapter 8.1 – 8.3
2. Use the study guide for Chapter 8 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 144**

1. Use section 8.3 again and answer the questions (the multiples of 3 to 24). Chapter 8.1 – 8.3
2. Check your answers for the chapter outline.

**Day 145**

1. Use section 8.3 to check your answers. Chapter 8.1 – 8.3
2. Figure out your mistakes from Day 144 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 146**

1. Read section 8.4, Probability and Calculus. Chapter 8.4 – 8.6
2. Use the study guide for Chapter 8 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 147**

1. Use section 8.4 again and answer the questions (the multiples of 3 to 33). Chapter 8.4 – 8.6
2. Check your answers for the chapter outline.

**Day 148**

1. Use section 8.4 to check your answers. Chapter 8.4 – 8.6
2. Figure out your mistakes from Day 147 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 149**

1. Read section 8.5, Masses and Moments. Chapter 8.4 – 8.6
2. Use the study guide for Chapter 8 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 150**

1. Use section 8.5 again and answer the questions (the multiples of 3 to 36). Chapter 8.4 – 8.6
2. Check your answers for the chapter outline.

**Day 151**

1. Use section 8.5 to check your answers. Chapter 8.4 – 8.6
2. Do number 42 and check your answer.
3. Figure out your mistakes from Day 150 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
4. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 152**

1. Read section 8.6, Force, Work, and Energy. Chapter 8.4 – 8.6
2. Use the study guide for Chapter 8 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 153**

1. Use section 8.6 again and answer the questions (the multiples of 3 to 21). Chapter 8.4 – 8.6
2. Check your answers for the chapter outline.

**Day 154**

1. Use section 8.6 to check your answers. Chapter 8.4 – 8.6
2. Do numbers 23 and 24 and check your answers.

3. Figure out your mistakes from Day 153 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
4. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 155**

1. Read section 9.1, Polar Coordinates. Chapter 9.1 – 9.2
2. Use the study guide for chapter 9 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 156**

1. Use section 9.1 again and answer the questions (the multiples of 3 to 27). Chapter 9.1 – 9.2
2. Check your answers for the chapter outline.

**Day 157**

1. Use section 9.1 to check your answers. Chapter 9.1 – 9.2
2. Figure out your mistakes from Day 156 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working. Or, you might want to watch the video lecture on polar coordinates.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 158**

1. Read section 9.2, Polar Equations and Graphs. Chapter 9.1 – 9.2
2. Use the study guide for chapter 9 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 159**

1. Use section 9.2 again and answer the questions (the multiples of 3 to 32). Chapter 9.1 – 9.2
2. Check your answers for the chapter outline.

**Day 160**

1. Use section 9.2 to check your answers. Chapter 9.1 – 9.2
2. Figure out your mistakes from Day 159 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 161**

1. Read section 9.3, Slope, Length, and Area for Polar Curves. Chapter 9.3 – 9.4
2. Use the study guide for chapter 9 along with the reading.

3. Fill in the blanks in the “Read-Through Questions” section.

**Day 162**

1. Use section 9.3 again and answer the questions (the multiples of 3 to 35). Chapter 9.3 – 9.4
2. Check your answers for the chapter outline.

**Day 163**

1. Use section 9.3 to check your answers. Chapter 9.3 – 9.4
2. Figure out your mistakes from Day 162 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can’t figure out the right answer.

**Day 164**

1. Read section 9.4, Complex Numbers. Chapter 9.3 – 9.4
2. Use the study guide for chapter 9 along with the reading.
3. Fill in the blanks in the “Read-Through Questions” section.

**Day 165**

1. Use section 9.4 again and answer the questions (the multiples of 3 to 33). Chapter 9.3 – 9.4
2. Check your answers for the chapter outline.

**Day 166**

1. Use section 9.4 to check your answers. Chapter 9.3 – 9.4
2. Figure out your mistakes from Day 165 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can’t figure out the right answer.

**Day 167**

1. Read section 10.1, The Geometric Series. Chapter 10.1 – 10.3
2. Use the study guide for chapter 10 along with the reading.
3. Fill in the blanks in the “Read-Through Questions” section.

**Day 168**

1. Use section 10.1 again and answer the questions (the multiples of 3 to 42). Chapter 10.1 – 10.3
2. Check your answers for the chapter outline.

**Day 169**

1. Use section 10.1 to check your answers. Chapter 10.1 – 10.3

2. Do number 43 and check your answer.
3. Figure out your mistakes from Day 168 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
4. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 170**

1. Read section 10.2, Convergence Tests: Positive Series. Chapter 10.1 – 10.3
2. Use the study guide for chapter 10 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 171**

1. Use section 10.2 again and answer the questions (the multiples of 3 to 60). Chapter 10.1 – 10.3
2. Check your answers for the chapter outline.

**Day 172**

1. Use section 10.2 to check your answers. Chapter 10.1 – 10.3
2. Figure out your mistakes from Day 171 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 173**

1. Read section 10.3, Convergence Tests: All Series. Chapter 10.1 – 10.3
2. Use the study guide for chapter 10 along with the reading.
3. Fill in the blanks in the "Read-Through Questions" section.

**Day 174**

1. Use section 10.3 again and answer the questions (the multiples of 3 to 36). Chapter 10.1 – 10.3
2. Check your answers for the chapter outline.

**Day 175**

1. Use section 10.3 to check your answers. Chapter 10.1 – 10.3
2. Figure out your mistakes from Day 174 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working. Or, you might want to watch this lecture on infinite series and convergence tests.
3. Record your score out of 10. Subtract one point for every problem you can't figure out the right answer.

**Day 176**

1. Read section 10.4, The Taylor Series for e^x, sin x, and cos x. Chapter 10.4 – 10.5

2. Use the study guide for chapter 10 along with the reading.
3. Fill in the blanks in the “Read-Through Questions” section.

**Day 177**

1. Use section 10.4 again and answer the questions (the multiples of 3 to 48). Chapter 10.4 – 10.5
2. Check your answers for the chapter outline.

**Day 178**

1. Use section 10.4 to check your answers. Chapter 10.4 – 10.5
2. Figure out your mistakes from Day 174 and work on other problems for practice. Keep checking your answers as you go. Spend 40 minutes working. Or, you might want to watch this video lecture on the Taylor Series.
3. Record your score out of 10. Subtract one point for every problem you can’t figure out the right answer.

**Day 179**

1. On Day 180 you are having a final. There will be one question from each of the first four chapters and two questions from each of last six chapters. They will all be problems that you have been assigned.
2. Here’s a review lecture from some things up through hyperbolic functions in 6.7.
3. Here’s a review video from right after polar coordinates.

**Day 180**

1. Take your calculus final. Read the directions. Don’t lose points!
2. Check your answers.
3. Record your total out of 100.
4. Congratulations! If you are planning on taking the AP exam, practice. Here are practice exams.
5. Save your work for your portfolio. Save your final. To figure out your final grade. Divide your total number of points for all four quarters into the total possible for all four quarters.

This course is derived from: David Jerison. *18.01 Single Variable Calculus, Fall 2006*. (Massachusetts Institute of Technology: MIT OpenCourseWare), http://ocw.mit.edu(Accessed 29 Dec, 2015).