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**Fri, Dec 12, 2008 -- Blog for Friday 12/12/08**

Posted by: rob donnelly

Well, here we go... The final HW list is available in course documents. There were 110 available points on the final, but in setting the curve I took the highest A as 104 (the highest mark in the class). From there, the curve was: 90 for A, 76 for B, 60 for C, 46 for D.

In what follows, I'll give code name, exam score if requested (scaled according to the above curve), and final grade if requested.

Tucan Sam, 85.71, A
 Optimus Prime, 81.43, B
 810255388, 56.74, D
 84Audio, 60.71, C
 Khalied, 56.74, D
 Sippy, 72.50, B
 Dance, 82.14
 cec2021, 71.88, C
 Remmy, 78.13, B
 MGJulius, 100, A
 the one true, 85.71, B
 8648, 71.88, B
 an_guy, 88.21, B
 No More Heros, 95.36, A
 Anita Von Hundredt, 88.93, A
 huggiebear5000, 67.14, C
 zygote, 50.87, D
 problems, 97.86
 Gayle, 94.29, A
 Gold2442, D
 Ellamenapee, 77.50, B
 Pioneers4, 62.14, B
 Princess Miguel, 78.44, B
 Bibbis, 95, A

I enjoyed having you all in class this semester, and I wish you all the best in your future endeavors. Happy holidays!

**Thu, Dec 04, 2008 -- Blog for Thursday 12/04/08**

Posted by: rob donnelly

Today I handed out a solution key to Quiz #5 (see course documents). The version handed out in class had at least one error, which is now corrected in the online version: in #2, the IOC should be $(-\infty, +\infty)$. Thanks to Kendall S. (or Kourtney S.?) for pointing this error out. In class I showed you solutions to two recent HW problems (10.2 #8, 44). We also briefly discussed 10.3 #26 and 10.3 #50. The latter was not a HW problem, and our class discussion of this problem didn't get very far. But, there's a solution in the class notes for today (see course docs).

There's no HW for tomorrow. My main goal between now and then is to compute your HW grade and have that ready to report to you tomorrow. I can also take questions

about the final during class tomorrow.

IF YOU ARE MISSING ANY SOLUTION KEYS, email me by 8:30 AM tomorrow so I know to make a photocopy for you. Tell me which one(s) you need.

ALSO, I won't be holding office hours on Monday Dec 8.



Wed, Dec 03, 2008 -- Blog for Wednesday 12/03/08

Posted by: rob donnelly

Today we finished our discussion of polar coordinates by looking at how to compute areas of regions bounded by polar curves. I also handed out the 'take-home quiz', which I will not be collecting. (A blank copy is posted to course documents.) There is no HW for tomorrow, but I suggested that you look at #3, 7, 27, 31 from Section 10.4, for practice.



Tue, Dec 02, 2008 -- Blog for Tuesday 12/02/08

Posted by: rob donnelly

Today we discussed a problem from the Section 10.3 HW (#18) and we looked at the problem of finding slopes of tangent lines to polar curves (#59, 63). I added three problems to the Section 10.3 HW.

Tomorrow we'll look at the problem of finding areas of polar regions -- Section 10.4, our last section. I plan to distribute a 'take-home' quiz. However, I will not be asking you to turn anything new in besides the Section 10.3 HW, which is due tomorrow.

HW: 10.3 #2, 4, 8, 12, 14, 18, 20, 22, 26 PLUS 56, 60, 62



Mon, Dec 01, 2008 -- Blog for Monday 12/01/08

Posted by: rob donnelly

Today we had an introduction to polar coordinates (Section 10.3). We'll do more with the calculus of polar coordinates tomorrow.

Also, on Wednesday I plan to distribute the take-home 'quiz' over our 'recent' material (series stuff from Sections 11.8 thru 11.11, plus 10.1 thru 10.4). This will not be graded.

HW: 10.3 #2, 4, 8, 12, 14, 18, 20, 22, 26



Tue, Nov 25, 2008 -- Blog for Tuesday 11/25/08

Posted by: rob donnelly

Today we used parametric equations to derive a formula for the speed of a point on a tire for a car that's moving forward at a constant speed. We discovered that when the point is at the top of the rotation of the tire, it's speed is twice that of the car, and when it is at the bottom of the rotation of the tire, it's speed is zero. Thus, a radar gun that catches the tire near the top of its rotation *could* register a speed that's far more than the actual speed of the car! But, since I know next to nothing about radar guns used by law enforcement, please do not reference me if you use such an argument with a judge to try and get out of a speeding ticket!

We used the idea of speed of a particle to derive a new formula for length of a curve. We tried an example -- 10.2 #43 -- which we almost got worked out in class. (I finished it in the notes.) I added a problem along these lines to the Section 10.2 HW, due Monday after break.

It was agreed that sometime next week I would give you a 'take-home quiz' in place of the usual kind of quiz we have preceding tests. I won't grade it, but there will be a solution key of some kind.

Have a happy Thanksgiving, be safe, and I'll see you next Monday.

HW for Mon 12/1: 10.2 #4, 8, 20, 44



Mon, Nov 24, 2008 -- Blog for Monday 11/24/08

Posted by: rob donnelly

Today we continued our discussion of parametric curves. We spent a good portion of class time going over #28 from the Section 10.1 HW. Hopefully this gave you some more helpful ways to think about curves defined by parametric equations. We also started a discussion of calculus with parametric curves -- Section 10.2. We mainly talked about tangent lines.

HW: 10.2 #4, 8, 20



Fri, Nov 21, 2008 -- Blog for Friday 11/21/08

Posted by: rob donnelly

Today we officially transitioned away from series and into our last topics -- parametric curves and polar coordinates. We looked at some examples of curves presented by parametric equations, and then I gave you an assignment from Section 10.1.

HW: 10.1 #6, 12, 16, 18, 28



Thu, Nov 20, 2008 -- Blog for Thursday 11/20/08

Posted by: rob donnelly

I had hoped that we would start into our next topic today (parametric curves), but we spent almost all of our time today working out solutions to the Section 11.11 HW problems. I don't have any notes to post today, but hopefully after the extra discussion today you're in pretty good shape on the assignment.

HW: 11.11 #2, 4, 8, 10



Wed, Nov 19, 2008 -- Blog for Wednesday 11/19/08

Posted by: rob donnelly

Today we got into the details of the Theorem on Binomial Series, Section 11.11. We looked at a couple of examples which will hopefully help with the HW.

HW: 11.11 #2, 4, 8, 10



Tue, Nov 18, 2008 -- Blog for Tuesday 11/18/08

Posted by: rob donnelly

We spent the bulk of class time getting better acquainted with Taylor series by taking a more detailed look at several problems. For this reason, I extended the due date for Section 11.10 by one more day. We started a discussion of the special type of Taylor series from Section 11.11 -- the binomial series. I suggested that you start working on 11.11 #2, 4, 8, 10, but this is not due tomorrow.

HW due Wed 11/19: 11.10 #4, 10, 12, 14, 40



Mon, Nov 17, 2008 -- Blog for Monday 11/17/08

Posted by: rob donnelly

After evaluations, we had a little time to look at another example where we computed coefficients for the Taylor series representation of a function (Section 11.10). We talked a little about the nature of the HW problems from this section, which are now due tomorrow.

HW: 11.10 #4, 10, 12, 14, 40



Fri, Nov 14, 2008 -- Blog for Friday 11/14/08

Posted by: rob donnelly

Today we pushed ahead with our discussion of power series, focussing on two of the

HW problems from Section 11.9 (#14, 30). We talked briefly about Taylor series and Maclaurin series, emphasizing Taylor's derivative formula for the nth coefficient of the power series.

I also handed out a grade summary for each of you -- it included my records of your four test grades (scaled using the announced curves to scores out of 100 points) as well as some comments on the homework grade.

HW for Mon 11/17: 11.10 #4, 10, 12, 14, 40



Thu, Nov 13, 2008 -- Blog for Thursday 11/13/08

Posted by: rob donnelly

Today I handed back Test #4. Out of 65 available points, you needed 57.5 for an A, 50 for a B, 40 for a C, and 29 to pass.

We also continued talking about some of the ideas from Section 11.9 by looking at a few more examples that illustrate the main ideas. The main ideas are: Given a function with a known power series representation, use substitutions, differentiation, and integration to obtain power series representations for other functions.

HW: 11.9 #4, 8, 14, 30



Tue, Nov 11, 2008 -- Blog for Tuesday 11/11/08

Posted by: rob donnelly

Today we went over an example of a Section 11.8 problem, and briefly discussed how this relates to a Section 11.9 idea (differentiating power series term-by-term). We also went over some error estimating problems (one from 11.3, one from 11.5). I also handed out a solution key to the quiz.

Test tomorrow covers: 11.2, 11.3, 11.4, 11.5, 11.6, 11.8



Mon, Nov 10, 2008 -- Blog for Monday 11/10/08

Posted by: rob donnelly

Today I handed back your quiz from Friday, and you put solutions on the board. I plan to distribute a solution key tomorrow. Your test Wednesday covers Sections 11.2, 11.3, 11.4, 11.5, 11.6, 11.8. We looked at an example of a Section 11.9 problem, and we'll do a little more with Sections 11.9 and 11.10 tomorrow, although I do plan to reserve a good portion of our time for questions about the test.

Problems you should be working on:

11.9 #4, 8, 14, 30 (not due before Friday 11/14)

11.10 #4, 10, 12, 14, 40 (not due before Friday 11/14)



Fri, Nov 07, 2008 -- Blog for Friday 11/07/08

Posted by: rob donnelly

You had your quiz today over Sections 11.3, 11.4, 11.5, 11.6, 11.8... a blank copy is available in course docs. I didn't collect the Section 11.8 HW today, so that's due Monday.

HW due Monday 11/10: 11.8 #4, 6, 10, 14, 18, 22, 26

Yesterday I forgot to include a list of problems from Sections 11.9 and 11.10 that will figure into future assignments from those sections. Here they are:

11.9 #4, 8, 14, 30 (not due Monday 11/10)

11.10 #4, 10, 12, 14, 40 (not due Monday 11/10)



Thu, Nov 06, 2008 -- Blog for Thursday 11/06/08

Posted by: rob donnelly

The due date for the Section 11.8 HW was pushed back one more day. While we spent a little more time talking about another Section 11.8 problem (#14), I used the problem as a way to introduce the main idea for the remainder of our discussion of series -- representing functions by power series. The two examples we looked at previewed the main ideas of Sections 11.9 and 11.10. While I'm negotiable on whether these will be on next Wednesday's test, we will need to make sure we've covered some ground in this direction before the test.

Tomorrow your quiz will cover: 11.2, 11.3, 11.4, 11.5, 11.6, 11.8.

HW due: 11.8 #4, 6, 10, 14, 18, 22, 26



Wed, Nov 05, 2008 -- *Blog for Wednesday 11/05/08*

Posted by: rob donnelly

Today we walked through another example of a function defined as a power series, and we investigated the questions of radius of convergence and interval of convergence. I also had you work on some of the HW problems during class time.

HW for Thursday: 11.8 #4, 6, 10, 14, 18, 22, 26



Mon, Nov 03, 2008 -- *Blog for Monday 11/03/08*

Posted by: rob donnelly

Today we looked at an application of series ideas to solving differential equations by way of introduction to the idea of functions represented as power series. I left you with some HW from Section 11.8 to work on... it's not due Wednesday, but you should definitely get a good start on it.

Also, I'm trying to be fair about the HW that was due today (11.3 #30, 32, 34; 11.5 #24, 26). Some of you went back home to vote, and I hate for that to be penalized, but many of you made an effort to get the assignment done for today, so I want that to be rewarded. So, for those of you who turn it in on Wed, there will be no penalty, but for those who turned it in today there will be a modest bonus reward.

HW (not due Wed, but be working on it): 11.8 #4, 6, 10, 14, 18, 22, 26



Fri, Oct 31, 2008 -- *Blog for Friday 10/31/08*

Posted by: rob donnelly

Happy Halloween! I hope you enjoyed watching (part of!) the Calculus II premiere of the new MSU Math Movie "The Zero Matrix". One of your HW assignments is to watch the movie on YouTube ([click here](#)) and also to pass the link along to friends/family.

We also did some math today. We talked more about estimating errors in using partial sums to approximate the sum of a series. I didn't collect anything today, but added two problems to the assignment I gave you yesterday:

HW: 11.3 #30, 32, 34; 11.5 #24, 26



Thu, Oct 30, 2008 -- *Blog for Thursday 10/30/08*

Posted by: rob donnelly

More series convergence and divergence today... and we also started taking a look at questions of approximating series sums for convergent series. Today we talked about error estimation using the Integral Test, and tomorrow we'll do the same for the Alternating Series Test.

HW: 11.3 #30, 32, 34



Wed, Oct 29, 2008 -- *Blog for Wednesday 10/29/08*

Posted by: rob donnelly

Today we looked at one more series convergence test -- the Root Test from Section 11.6 -- which is the last series convergence test we'll learn. We also spent some time discussing various series problems. I didn't collect the HW that was originally due today, but instead added some problems.

HW for Thurs: 11.5 #8, 10, 14; 11.6 #4, 10, 14 PLUS 11.5 #20; 11.6 #20, 24, 28



Tue, Oct 28, 2008 -- *Blog for Tuesday 10/28/08*

Posted by: rob donnelly

Today we recapped the series convergence/divergence tests we've learned so far (TFD, GST, IT, PST, LCT) and added two new tests: the Alternating Series Test (Sect 11.5) and the Ratio Test (Sect 11.6).

HW: 11.5 #8, 10, 14; 11.6 #4, 10, 14



Mon, Oct 27, 2008 -- *Blog for Monday 10/27/08*

Posted by: rob donnelly

Today we continued our discussions on series convergence... You put solutions to the 11.4 HW problems on the board, and I asked you to keep working on these for tomorrow.

HW: 11.4 #4, 10, 16, 20, 22, 24, 26, 28



Fri, Oct 24, 2008 -- *Blog for Friday 10/24/08*

Posted by: rob donnelly

I handed back your tests from Wednesday, along with a solution key. Scores were out of 70 points. You needed 60 for an A, 48 for a B, 38 for a C, and 28 to pass.

We then went further into our discussion of convergence and divergence of series. We talked about 11.3 #16 and 18 in terms of the Integral Test and the Limit Comparison Test. We talked about how to use the LCT to address some of the series problems from 11.4.

HW for Mon: 11.4 #4, 10, 16, 20, 22, 24, 26, 28



Thu, Oct 23, 2008 -- *Blog for Thursday 10/23/08*

Posted by: rob donnelly

I didn't have your tests ready to hand back today, but I should have them ready for tomorrow.

We talked more about series today, recapping some of the Section 11.2 ideas (Test For Divergence -- TFD, Geometric Series Test -- GST), looked more in depth into the Section 11.3 stuff (Integral Test -- IT, p-Series Test -- PST), and previewed the next Section 11.4 (Comparison Test -- CT, Limit Comparison Test -- LCT).

HW: 11.3 #12, 14, 16, 18, 20

(I also suggest that you start taking a look at 11.4 #4, 10, 16, 20, 22, 24, 26, 28, which will likely be part of your next assignment.)



Tue, Oct 21, 2008 -- *Blog for Tuesday 10/21/08*

Posted by: rob donnelly

I didn't blog yesterday because Blackboard was down, but here's what's been going on. On Monday we talked about series as a sequence of partial sums, and our main examples were so-called 'geometric' series. We worked 11.2 #12, 16, and 20. I suggested that you work on 11.2 #21, 22, 27, 35, 37, 44 to help you get the ideas down. Following on this today, we looked at more applications of the GST (Geometric Series Test) in Section 11.2 problems. See the notes in course docs. (I mentioned the

Integral Test -- Sect 11.3 -- but you are not responsible for this for your test tomorrow.)

Your test Wed 10/22 covers: 7.8 improper integrals, 8.1 length, 8.2 surface area, 11.1 sequences, and 11.2 series (esp. the GST). You should also be able to apply L'Hospital's Rule (Sect 4.4) as needed.



Fri, Oct 17, 2008 -- Blog for Friday 10/17/08

Posted by: rob donnelly

Today we discussed Section 11.1 #58 before your quiz. (A blank copy of the quiz is in course docs.)

I strongly suggest that you be working on the geometric series problems from 11.1 (#12, 16, 20).



Thu, Oct 16, 2008 -- Blog for Thursday 10/16/08

Posted by: rob donnelly

Today we transitioned into a discussion of series, which could be thought of roughly as an infinite sum. We discussed 'geometric series', where the terms of the series are powers of some fixed base. We used the problems from #2 of yesterday's worksheet as examples of series, and even saw how an 'integral test' shows that the 'harmonic series' diverges.

I announced that amnesty on the HW due Tues 10/7 (7.8 #8, 10, 14, 24, 30, 68 PLUS 4.4 #18, 31, 34, 50) ends tomorrow at the beginning of class -- by that time you must have turned in any problems that were missing from the assignment in order to get back up to a 'check' level of credit for the assignment. If you had already turned everything in on time, then you get +.5 points added to your grade on the assignment (out of 5 pts).

Tomorrow (Friday 10/17) there will be a quiz. The quiz will cover 7.8, 8.1, 8.2, and 11.1. The ideas of section 4.4 L'Hospital's Rule are also fair game, as they come up often in evaluating limits at infinity. The test next Wed will cover this same material plus (most likely) 11.2 and 11.3 as well.

I suggested that you start working on these geometric series problems from 11.2: #12, 16, 20. But, these are not due on Friday.



Wed, Oct 15, 2008 -- Blog for Wednesday 10/15/08

Posted by: rob donnelly

Today I gave you a worksheet with lots of sequence/limit problems. Some of those problems (#2 a, b, c) are a preview of our next topic. Your HW is to finish the worksheet. It looked to me like you all were having some very nice discussions about the problems, and you seemed to have them mostly under control. We do have a test coming up next week, and therefore a quiz on Friday. The quiz is likely to cover Sections 7.8, 8.1, 8.2, and 11.1. The test will cover this material plus new material in the early section of Chapter 11.

HW: Finish the worksheet (posted in course docs)



Tue, Oct 14, 2008 -- Blog for Tuesday 10/14/08

Posted by: rob donnelly

Today we continued talking about sequences and sequence-related problems. I didn't collect the Section 11.1 assignment today, but I plan on collecting it tomorrow.

HW for Wed: 11.1 #4, 8, 10, 12, 14, 16, 22, 32 PLUS 40, 42, 46, 58, 64



Mon, Oct 13, 2008 -- Blog for Monday 10/13/08

Posted by: rob donnelly

Today we continued our discussion of sequences, and I added to your Section 11.1 assignment. (I did not collect anything today.)

HW for Tues: 11.1 #4, 8, 10, 12, 14, 16, 22, 32 PLUS 40, 42, 46, 58, 64



Fri, Oct 10, 2008 -- Blog for 10/10/08

Posted by: rob donnelly

Limits at infinity are quite curious things... Hope you enjoyed our little exploration of the Paradox of Gabriel's Horn and our other musings on the infinite. Today we started a discussion of sequences (Ch 11) which will continue for a while.

HW for Monday: 11.1 #4, 8, 10, 12, 14, 16, 22, 32



Thu, Oct 09, 2008 -- Blog for Thursday 10/09/08

Posted by: rob donnelly

Today we talked more about surface areas for solids of revolution. We also took a look at more examples of L'Hospital's Rule, which will be helpful when we start discussing sequences soon. I didn't collect the assignment that was due today, but instead added some problems:

HW: 8.2 #2, 4, 12, 14 PLUS 8.2 #8 AND 4.4 #56, 62



Wed, Oct 08, 2008 -- Blog for Wednesday 10/08/08

Posted by: rob donnelly

Today we spent much of our class time setting up and working through the arc length integration HW problems from Section 8.1. We took a brief look at the topic of surface area (Section 8.2), and I gave you an assignment:

HW: 8.2 #2, 4, 12, 14



Tue, Oct 07, 2008 -- Blog for Tuesday 10/07/08

Posted by: rob donnelly

Today we talked a little more about improper integrals, limits at infinity, etc. There are a few more examples in the notes from today. We also talked about a Section 8.1 topic - length of a curve. That's what your assignment for tomorrow covers.

HW: 8.1 #4, 6, 10, 36



Mon, Oct 06, 2008 -- Blog for Monday 10/06/08

Posted by: rob donnelly

Today we talked more about improper integrals, and in particular how to set up problems 24 and 30 from the HW from Section 7.8. This occasioned a brief digression on the topic of L'Hospital's Rule, which led to the addition of a few problems from the L'Hospital's Rule section of your textbook (4.4).

HW for Tuesday: 7.8 #8, 10, 14, 24, 30, 68 PLUS 4.4 #18, 31, 34, 50



Thu, Oct 02, 2008 -- Blog for Thursday 10/02/08

Posted by: rob donnelly

NO CLASS FRIDAY -- IT'S FALL BREAK!

Today I handed back test #2. It was out of 65 points. You needed 58 for an A, 50 for a B, 40 for a C, and 33 to pass. I also handed out a solution key with the tests.

We moved on to our last Chapter 7 topic: improper integrals (Section 7.8). I worked some examples in class. I left you with some improper integral problems for HW for Monday. There are several examples posted in the notes in course docs. I talked about maybe putting another example in the notes after we adjourned, but that didn't happen.

HW for Monday 10/6: 7.8 #8, 10, 14, 24, 30, 68

**Tue, Sep 30, 2008 -- Blog for Tuesday 09/30/08**

Posted by: rob donnelly

Today we did more work with the Midpoint and Trapezoidal Rules, thinking in particular about how to compute with the formulas and what the error estimates (p 521) mean. I won't be collecting the Section 7.7 problems, but -- with the exception of Simpson's Rule, which we did not cover -- the ideas there are fair game. So your test covers Sections 7.1 through 7.5 plus Section 7.7.

See you tomorrow!

**Mon, Sep 29, 2008 -- Blog for Monday 09/29/08**

Posted by: rob donnelly

I forgot to blog on Friday... but mainly you just took your quiz. I handed that back today. I've posted a blank copy to Blackboard, and there are solutions in the notes for today. Tomorrow we'll talk more about the Midpoint and Trapezoidal Rules (Section 7.7). I'm not planning on collecting the Section 7.7 problems. Also, Simpson's Rule will not be covered on Wednesday's test.

**Thu, Sep 25, 2008 -- Blog for Thursday 09/25/08**

Posted by: rob donnelly

Today we talked a little more about Section 7.5 problems (man this is a tough section!), and then moved on to thinking about numerical approaches to computing definite integrals (Section 7.7). There's nothing from Section 7.7 due tomorrow or on the quiz -- which will cover Sections 7.1 thru 7.5 -- but by now you should be taking a serious look at those problems.

For Friday: Quiz on 7.1 thru 7.5
Soon (but not due Fri): 7.7 #10, 12, 16, 20, 22

**Wed, Sep 24, 2008 -- Blog for Wednesday 09/24/08**

Posted by: rob donnelly

Hope you enjoyed tinkering with Maple today. It's a pretty powerful computer algebra system, and we were just scratching the surface. I did leave you with a few more Section 7.5 problems for HW for tomorrow. We'll be looking at numerical integration (Section 7.7) tomorrow, and I've got a preview of that assignment below.

HW: 7.5 #12, 20, 46
Soon (but not due Thurs): 7.7 #10, 12, 16, 20, 22

**Tue, Sep 23, 2008 -- Blog for Tuesday 09/23/08**

Posted by: rob donnelly

Today we spent most of classtime setting up the problems from Section 7.5. They're tough problems, no doubt about it. But they ask you to exercise a lot of skills, and that exercise will make you sharper come time for the quiz later this week and next week's test. In the notes for today (posted in course docs) we worked out #14. Your HW for Thurs is still:

HW: 7.5 #4, 6, 8, 14, 16, 18, 22, 32

**Mon, Sep 22, 2008 -- Blog for Monday 09/22/08**

Posted by: rob donnelly

Today we discussed further the technique of partial fractions. In some problems (like #16) long division is necessary to do first: do this when the numerator polynomial has degree larger than the degree of the denominator polynomial. Toward the end of class I mentioned that the next problem set asks you to put it all together -- in a mix of integration problems, what's the best strategy?

HW: 7.5 #4, 6, 8, 14, 16, 18, 22, 32

**Fri, Sep 19, 2008 -- Blog for Friday 09/19/08**

Posted by: rob donnelly

Thanks to Steven S. for sticking around to help me sort out the arithmetic issues I was having on the last problem of the day. I do hope you got a good feeling for the technique of partial fraction decomposition.

HW for Mon: 7.4 #10, 12, 16, 20

**Thu, Sep 18, 2008 -- Blog for Thursday 09/18/08**

Posted by: rob donnelly

So, trig substitutions can be kind of involved, as we've found out with this assignment. You put solutions to the problems on the board, although I have to confess that an error in the solution presented to #6 slipped by me... so double-check that one. I didn't collect the assignment today, and will wait on that until tomorrow.

HW: 7.3 #4, 6, 12, 16, 20, 24.

NOTE: I'm still holding off on 7.2 #66, 68 for now.

**Wed, Sep 17, 2008 -- Blog for Wednesday 09/17/08**

Posted by: rob donnelly

We continued our discussion of trig substitution by looking at more examples.

HW: 7.3 #4, 6, 12, 16, 20, 24.

NOTE: I'm still holding off on 7.2 #66, 68 for now.

**Tue, Sep 16, 2008 -- Blog for Tuesday 09/16/08**

Posted by: rob donnelly

Today we looked at trig integrals a little bit more as we discussed a couple of the HW problems. Then we went on to consider another technique of integration, that of making a trig substitution (Section 7.3). We'll do more with this tomorrow (Wed), so I'm not going to collect anything on Wednesday. But you should still get started on the Section 7.3 HW.

HW (start on this, not due Wed 9/17): 7.3 #4, 6, 12, 16, 20, 24.

NOTE: I'm still holding off on 7.2 #66, 68 for now.

**Mon, Sep 15, 2008 -- Blog for Monday 09/15/08**

Posted by: rob donnelly

Today we really got into integrating trig functions. This new section (7.2) isn't as systematic as the previous section on integration by parts; it's really more of a bag of tricks. Please note that I'm postponing two of the 7.2 HW problems suggested the other day until the next assignment.

HW: 7.2 #7.2 #4, 8, 14, 26, 30, 46, 63 [NOTE: #66, 68 will wait until the next HW]

**Fri, Sep 12, 2008 -- Blog for Friday 09/12/08**

Posted by: rob donnelly

Today I gave you some integration by parts problems to work on, and you put solutions on the board (7.1 #16, 24, 28, 34, 46, 56, 60). We didn't have time to move on into the next section, so I left you with a very abbreviated assignment for the weekend.

HW: 7.1 #16

Possibly due Tuesday 9/16: 7.2 #4, 8, 14, 26, 30, 46, 63, 66, 68

**Thu, Sep 11, 2008 -- Blog for Thursday 09/11/08**

Posted by: rob donnelly

Sorry I'm posting this kind of late... I handed back your tests today. Scores were out of 60 points and curved as follows: You needed 51 for an A, 43 for a B, 34 for a C, and

26 to pass. Students put solutions to tests problems on the board, which we then discussed. We also talked briefly about integration by parts again.

HW: 7.1 #4, 6, 10, 22, 24, 28, 34



Tue, Sep 09, 2008 -- Blog for Tuesday 09/09/08

Posted by: rob donnelly

Today we went over problems from Friday's quiz and I took questions on other problems (average value 6.5 #18, 22, work from Ch 6 review #27, 28, 29). Your test tomorrow is mainly a Chapter 6 test, although I'll presume your familiarity with integration as in Chapter 5. I'm on the record stating there won't be any mid-point rule calculations on this test.

There are some Section 7.1 problems out there (7.1 #4, 6, 10, 22, 24, 28, 34). These won't be due Thursday, but I may add to that list for Friday's HW.



Mon, Sep 08, 2008 -- Blog for Monday 09/08/08

Posted by: rob donnelly

Today we ventured on into new material, with our first look at the integration techniques of Chapter 7. The new technique we focussed on is integration by parts (Ch 7.1). After working through some examples, I gave you a short list of problems to be working on. These will not be on your test on Wed, but HW for Ch 7.1 will be due shortly thereafter.

Today I returned your quizzes from Friday. I've also posted a solution key to Quiz #1. I have reserved tomorrow for discussion about test material, going over old problems and HW, etc.

HW (possibly due Thursday?): 7.1 #4, 6, 10, 22, 24, 28, 34



Fri, Sep 05, 2008 -- Blog for Friday 09/05/08

Posted by: rob donnelly

Today you had your first quiz of the semester. I'll try and have it graded by Monday. We'll need to cover some new material before your test on Wednesday, but we can negotiate on whether the new stuff will be on that test. I didn't collect the Section 6.5 HW, so that will be due Monday. (I also handed out some solutions to a couple of the volume problems I graded on the previous assignment, since we didn't get a chance to talk about that in class yesterday. These are posted in course documents, along with a copy of today's quiz.)

HW: 6.5 #2, 4, 10, 16, 18, 22



Thu, Sep 04, 2008 -- Blog for Thursday 09/04/08

Posted by: rob donnelly

Today we spent most of classtime discussing the idea of the average value of a function. I gave you some HW from Section 6.5. Don't forget about your quiz tomorrow -- it's comprehensive, but only worth a HW grade.

HW: 6.5 #2, 4, 10, 16, 18, 22



Wed, Sep 03, 2008 -- Blog for Wednesday 09/03/08

Posted by: rob donnelly

Today I gave you the task of setting up the homework problems and putting your work on the board. This exercise plus our discussions took most of class, but hopefully you feel pretty good about the section 6.4 stuff at this point. I didn't collect the Section 6.4 HW today, it will be due tomorrow. I also told you what the HW problems from Section 6.5 would be -- we'll talk about Section 6.5 tomorrow, and the HW will be due Fri. Also, there will be a comprehensive quiz on Friday. Don't panic -- it only counts as a HW. But hopefully this will be a good preparatory exercise for your first test, which is next Wed.

HW for Thurs: 6.4 #6, 8, 10, 14, 20, 24

HW for Fri: 6.5 #2, 4, 10, 16, 18, 22



Tue, Sep 02, 2008 -- Blog for Tuesday 09/02/08

Posted by: rob donnelly

Today we moved on to a new application of integration: Work. The high school formula of $\text{Work} = \text{Force} \times \text{Distance}$ only works when the force applied is constant over the distance. The college/Calc II formula is that work is the definite integral of the force function over the appropriate interval. We looked at several examples, and then I left you with an assignment from Section 6.4.

HW: 6.4 #6, 8, 10, 14, 20, 24



Fri, Aug 29, 2008 -- Blog for Friday 08/29/08

Posted by: rob donnelly

Today we looked at a few more volume problems (6.3 #13, 6.2 #24 -- by disks and by shells), and we spent some time discussing some other volume concepts such as volume of a torus (6.2 #61, 6.3 #44) and Cavalieri's principle (6.2 #63). [In course documents I'll post an approach to the problem of finding the volume of a torus.] I did not collect the assignment that was originally due today, but I did add a couple of volume problems.

HW for TUESDAY Sept 2: 6.2 #26, 28 AND 6.3 #2, 8, 10; PLUS 6.1 #40 AND 6.3 #14, 18.



Thu, Aug 28, 2008 -- Blog for Thursday 08/28/08

Posted by: rob donnelly

Today we continued our discussion of volume problems -- seeing how slices that are 'washers' and 'shells' can be used to set up integrals for calculating volume.

HW: 6.2 #26, 28; 6.3 #2, 8, 10



Wed, Aug 27, 2008 -- Blog for Wednesday 08/27/08

Posted by: rob donnelly

Today we went over a few area and volume problems, emphasizing the method of slicing. We also derived the formula for the volume of a right circular cone.

HW: 6.2 #4, 8, 12, 24



Tue, Aug 26, 2008 -- Blog for Tuesday 08/26/08

Posted by: rob donnelly

We started with a simple problem: Find the area of a triangle whose vertices have been specified as points in the xy -plane. We talked about calculus solutions and noncalculus solutions. An interesting question: If the coordinates for the vertices are integers, then must the area be an integer or half-integer? We also discussed how a region in the plane can be presented as the solution set to a system of inequalities. Finally, we started looking at our next topic: volume (Section 6.2). The main idea is to use the method of slicing in order to view a volume calculation as the limit of a Riemann sum, i.e. a definite integral.

HW: 6.1 #28, 38 AND 6.2 #2, 6



Mon, Aug 25, 2008 -- Blog for Monday 08/25/08

Posted by: rob donnelly

The main idea from today's class was how to use the "method of slicing" to see how a definite integral can arise as a solution to several different kinds of problems. One such problem in that of finding the area between curves. We looked at some example problems from Section 6.1, and I left you with an assignment for tomorrow.

HW: 6.1 #2, 4, 6, 8, 14, 18, 36



Fri, Aug 22, 2008 -- *Blog for Friday 08/22/08*

Posted by: rob donnelly

Today you put solutions to yesterday's assignment on the board. We also spent time discussing how to integrate the absolute value of a function and on the difference between distance/displacement and speed/velocity. For Mon, I asked you to look ahead at Section 6.1, which will be our first application of integration.

HW: Read 6.1 and start working on #2, 4, 6, 8, 14, 18, 28, 36, 38



Thu, Aug 21, 2008 -- *Blog for Thursday 08/21/08*

Posted by: rob donnelly

Today we discussed some of the HW problems from last night's assignment, and we continued with our brief review of basic integral calculus. There are two main components to our review: (1) Remember how to evaluate definite and indefinite integrals, and (2) Understand why/how integrals are helpful.

HW for Friday: Ch 5 Review p 431 #12, 26, 28, 36, 38, 56



Wed, Aug 20, 2008 -- *Blog for Wednesday 08/20/08*

Posted by: rob donnelly

Welcome (back) to MSU! Today we had a brief introduction to some of the particulars of how our Calculus II class will operate this semester (syllabus, absence report, etc). Then we started back into mathematics with a quick look at a couple of integration problems. We'll continue with our brief review of integration tomorrow.

Check course documents to see what handouts etc were posted. Also, there is an assignment due tomorrow!

HW: Ch 5 Review p. 431 #10, 14, 16, 22, 30

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