

## Math 125 End of Week 9 Newsletter

### UPCOMING SCHEDULE:

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|------------|--|
| Friday:    | Section 9.4 (Applications of Separable Differential Equations) |
| Monday:    | Section 9.4 (More applications) and Final Review               |
| Tuesday:   | HW Q & A   |
| Wednesday: | Final Review   |
| Thursday:  | Final Review   |
| Friday:    | Final Review   |

**The Math 125 Final is Saturday, March 11<sup>th</sup>, from 1:30-4:20pm in Kane 130.**

### HOMEWORK:

Closing Wednesday at 11:00pm: HW\_9A,9B,9C (covers 9.1, 9.3, 9.4).

### HOMEWORK COMMENTS AND HINTS:

On HW\_9: Ask questions in quiz section. Separate, integrate, simplify. And use given information.

### NEW AND LAST POSTINGS

Here, again, is the course website: <https://sites.math.washington.edu/~aloveles/Math125Winter2017/index.html>

No significant new postings, but do check out my lecture notes (the 8.3 lecture notes contain every formula you need for that section):

1. **Final Review Checklist:** <https://sites.math.washington.edu/~aloveles/Math125Winter2017/FinalReview.pdf>
2. **Quick Review of New Material (Chapter 9): Ignore center of mass**  
<https://sites.math.washington.edu/~aloveles/Math125Winter2017/AfterExam2Material.pdf>
3. **Longer Discussion of Differential Equation Applications** (this goes a bit beyond what you need to know, but it should help you get a stronger understanding):  
<https://sites.math.washington.edu/~aloveles/Math125Winter2017/9-4DifferentialEquations.pdf>

### Supplemental Postings:

Here are two review sheets from the first two weeks of my Math 307 course. These are more in-depth application review sheets with examples and practice problems. These problems are harder than in this class, so if you can do these problems then you will be more than ready for anything we can ask on our final.

#### My Math 307 Differential Equation Application Discussion:

<https://sites.math.washington.edu/~aloveles/Math307Spring2016/DifferentialEquationApplications.pdf>

#### My Math 307 Differential Equation Application Practice Problems:

<https://sites.math.washington.edu/~aloveles/Math307Spring2016/m307Review2-3.pdf>

## OLD EXAMS:

The math departmental **final exam archive** is here: <http://www.math.washington.edu/~m125/Quizzes/Q10.php>

Here are some targeted practice problems from old exams on the current material:

NOTE: The last two pages of almost every final in the archive is about differential equations, so you can find a lot more practice than what is listed below. I randomly clicked on several old finals and categorized what I saw as follows:

### for practice using section 9.3 material (Separable Equations straight solving):

Problem 9: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalW16.pdf>

Problem 9: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalW15.pdf>

Problem 9: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalW13.pdf>

Problem 10: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalA09.pdf>

Problem 9: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalA15.pdf>

### for practice using section 9.4 material (Differential Equations Applications):

#### *Newton's Law of Cooling:*

Problem 10: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalW13.pdf>

Problem 10: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalA15.pdf>

Problem 10: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalSp12.pdf>

#### *Mixing Problems:*

Problem 10: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalW15.pdf>

Problem 10: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalSp14.pdf>

Problem 10: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalW10.pdf>

#### *Savings Money:*

Problem 10: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalSp13.pdf>

Problem 9: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalW11.pdf>

#### *Equation Given:*

Problem 10: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalW12.pdf>

Problem 11: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalA09.pdf>

Problem 10: <http://www.math.washington.edu/~m125/Quizzes/week10/125finalW16.pdf>

I hope some of this helps.

Dr. Andy Loveless