UPCOMING ASSIGNMENTS
- *Closing Wed before class:*   9.9 Self-Check   **on Canvas**
- *Closing Thu*:   9.5, 9.6, 9.7(1), 9.7(2) HW   **on Webassign**

UPCOMING SCHEDULE:

Mon:	No class holiday
Tue:	Lab
Wed:	9.9 (Derivative applications and graphs)
Thu:	Lab
next Fri:	Quiz 2 (on 9.5, 9.6, and 9.7)

HOMEWORK: *Homework Stats* and Notes (Read this!):
- On 9.1 through 9.5 so far the median scores are 100%, great!! So almost all of you are completing the homework with 100% that is a good start.
- On the derivative problems in 9.4, 9.5 and 9.6, Webassign shows that about 57% of the class got it correct on the first submissions. Remember, you only get one submission on the test.
  Keep practicing until you can get it right the first time.
- I notice on the first submission, that quite a few of you missed the tangent line questions (9.5/8-9), my guess is you might have missed lecture as we did the same example (or perhaps you didn't read that question carefully). If tangent lines confused you, make sure to look at the 9.5/6 lecture notes and videos for an example of tangent lines. You also can see three more worked examples in my 9.6 review sheet.

Homework Hint: A few of the first problems in the 9.7(1) homework ask you to "simplify" your derivatives. As I said in class, we don't emphasize simplifying in this class, the focus at the moment is on taking derivatives. At the same time it is definitely true that some of these derivatives are long and it might make it easier to type them in if you simplify a little bit. So here are my four tips on simplifying…

1. ***Rewrite without negative exponents***….   so instead of $4x^{-3}$,   write $\frac{4}{x^3}$.
2. ***Combine numbers and powers***….   so instead of $4x^5 \cdot 3x^2$,   write $12x^7$.
3. ***Combine like terms***…   so instead of $2x^2 + 19x^2 - 4$,   write $21x^2 - 4$.

The three above things are what you need to do in the homework to "correctly" simplify as the Webassign wants.
   For fun, let's go a bit further (this is more advanced, you don't have to do this, but it might make typing in answers easier)..

4. ***Factor where possible***… so instead of $(x + 1)(x - 2)^2 + (x + 1)^2(x - 2)$
   realize that both terms have one (x+1) and one (x-2) which you can factor out to get
   $$(x + 1)(x - 2)(x - 2 + x + 1) = (x + 1)(x - 2)(2x - 1)$$

If you want to see more worked examples (directly from homework) but with some simplification, check out these examples I wrote up from the 9.7 HW.

NEW POSTINGS: See all these and previous reviews on my course website.
1. Review of 9.7/9.8 with examples (if you are having trouble with this homework or combining derivative rules, please read through this review sheet carefully for more practice and help)
2. Review of 9.9 (it would be wise to read through this to make sure you are clear on applications)
3. Derivative Graph Fact Sheet (a brief one-page visual review of all the essential derivative graph facts)

OLD EXAMS: Here is the EXAM ARCHIVE
For practice with 9.5-9.7 Derivatives and tangent lines try:

Problem 1from:	w19m112e1v1.pdf (washington.edu)
Problem 1 from:	win17exam1taggart.pdf (washington.edu)
Problem 1 from:	w18MT1_loveless.pdf (washington.edu)
Problem 4(c) from:	w18MT1_loveless.pdf (washington.edu)

Hope this helps.   - Dr. Andy Loveless