AP Calculus AB
Dr. Paul L. Bailey

Lesson 03/17
Tuesday, March 17, 2020

Your assignment for today is as follows:

- Print the attached document `ACalABx33_MathFactsComplete.pdf`. Fill it out as quickly as you can. Then print `ACalABx33_MathFactsAnswers.pdf` and grade yourself.

- Read Thomas §8.1, pages 553, 554, and 555, through Example 2.

- Practice these new techniques by doing these problems. Follow the hints.

  - §8.1 # 1 (Substitution with $u = 8x^2 + 1$, then power rule)
  - §8.1 # 2 (Substitution with $u = 1 + 3\sin x$)
  - §8.1 # 5 (Substitution, then power rule)
  - §8.1 # 7 (Substitution with $u = \sqrt{x} + 1$)
  - §8.1 # 25 (recognize that it is some sort of arctangent, substitute $w^2 = 9u^2$)
  - §8.1 # 28 (recognize that it is some sort of arcsine, substitute $u^2 = 4t^2$)
  - §8.1 # 31 (recognize that it is some sort of arcsecant, substitute $u^2 = 25x^12$)
  - §8.1 # 40 (note that $2\theta - \theta^2 = 1 - (\theta - 1)^2$)
  - §8.1 # 42 (note that $x^2 - 4x + 3 = 1 + (x - 2)^2$, you will see an arcsecant emerging)
  - §7.7 # 129 (Something to think about)

- Please relax while trying to do this. I know things will be bumpy for a while. Just do your best.

- Submit the following (for now, via email to `paul.bailey@basised.com`)

  - For your first from-home assignment, I would like you to review what we have done so far in the course, pick one concept that you only partially understand, and write a few sentences regarding where you are stuck. I will try to answer these questions in bulk after I receive them.

Good luck.