AP Calculus
1.6 Worksheet

All work must be shown in this course for full credit. Unsupported answers may receive NO credit.

1. Complete the following questions from the textbook:

   a) Page 52 - 53 # 11 – 14, 24, 31 – 38, 41 – 43
   b) Page 55 #1, 2, and 4

2. Let $f(x)=1-3\cos(2x)$.

   a) What is the domain of $f(x)$?

   b) What is the range of $f(x)$?

   c) What is the period of $f(x)$?

   d) Is $f(x)$ an even function, an odd function, or neither? Justify your response.

   e) Find all the zeros of $f(x)$ on the interval $\left[\frac{\pi}{2},\pi\right]$.

The next two examples came from the 2007 AP Exam Free Response #4 (without a calculator). While the question itself focused on topics we will not cover until later in the year, the problems students had in answering the question stemmed from solving the following equations.

3. Solve for t if $0\le t\le 2\pi$. $e^{-t}\cos t+\sin t\left(-e^{-t}\right)=0$

4. Solve for A: $A\left(-2e^{-t}\cos t\right)+e^{-t}\left(\cos t-\sin t\right)+e^{-t}\sin t=0$

5. Begin reviewing Chapter 1 by completing the following questions from the textbook: Page 56 #1 – 53 odd, 60 – 67. This is not due until the day of the exam.