MTH 178 Chapter 3 Review

Section 3.1 – Reference Angle

- Know how to use the reference angle to find exact values for the trigonometric functions of certain angles.
- Remember, the angles given will have to be those that have reference angles of 0˚, 30˚, 45˚, 60˚, or be a multiple of 90˚.
- To earn full credit for these problems, you will need to draw the reference angle and the relevant triangle in the correct quadrant.

Section 3.2 – Radians and Degrees

- Know how to convert degrees to radians and radians to degrees.
- Be able to find the exact values of for the trigonometric functions of angles that have reference angles of 0, $\pi/6$, $\pi/4$, $\pi/3$, or any multiply of $\pi/2$. (This will be done in the same manner as in section 3.1, but with radians instead of degrees).

Section 3.4 – Arc Length and Area of a Sector

- Know the formulas covered in this section and be able to use them to solve application problems.

$s = r\theta$ $A = \frac{1}{2}r^2\theta$

Section 3.5 – Velocities

- Know the formulas covered in this section and be able to use them to solve application problems.

$v = s/t$ $\omega = \theta/t$ $v = r\,\omega$

- Pay special attention to the Lance Armstrong Problem done in class and the Gear Problem from the homework.

Section 2.5

- Know what vectors are and be able to find the horizontal and vertical components of any vector.