Homework 9

Due on April 1 through Blackboard.

Exercise Set 3 is on Page 27 in the online notes

www.math.purdue.edu/~zhan1966/teaching/362/diffforms.pdf

1. Prolem 1(a) in Exercise Set 3 in the notes.
2. Prolem 2(a) in Exercise Set 3 in the notes.
3. Prolem 2(b) in Exercise Set 3 in the notes.
4. Prolem 2(c) in Exercise Set 3 in the notes.
5. Prolem 4 in Exercise Set 3 in the notes.

   Hint: for Problem 2, you can use either cylinderical or spherical coordinates. For cylinderical coordinates, you need to split the sphere into upper and lower halves. For each half, find the parametrization matching the given orientation (i.e. normal vectors).