## Homework 7

Due on March 11 in class.

Exercise Set 2 is on Page 16 in the online notes

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

- 1. Prolem 1 in Exercise Set 2 in the notes.
- 2. Prolem 2 in Exercise Set 2 in the notes.
- 3. Prolem 5 in Exercise Set 2 in the notes.
- 4. Prolem 8 in Exercise Set 2 in the notes.
- 5. Let f(x, y, z, t) be a  $C^2$  four-variable function.
  - (a) Compute df.
  - (b) Use the properties of d to verify that d(df) = 0.