

Show all your work. Due June 2nd, 2017.

Name:**Student ID:****1. (Evaluate Value of A Function of Two Variables)**

Try to answer the following matched problem from page 451:
Matched Problem 2, Section 8.1

2. (Evaluate Value of A Function of Two Variables)

For the function $f(x, y) = x^2 + 2y^2$, find:

(A) $\frac{f(x+h, y) - f(x, y)}{h}$

(B) $\frac{f(x, y+k) - f(x, y)}{k}$

3. (Three Dimensional Coordinates, Graphs)

Try to answer the following two matched problems from page 453 - 455:
Matched Problem 6, Section 8.1
Matched Problem 7(A), Section 8.1

4. **(Compute Partial Derivatives or Second Order Partial Derivatives of A Function of Two Variables)**

Try to answer the following three matched problems from page 459-463:

Matched Problem 1, Section 8.2

Matched Problem 2, Section 8.2

Matched Problem 5, Section 8.2

5. **(Second Derivative Test for Local Extrema of A Function of Two Variables)**

Try to answer the following matched problem from page 467-471:

Matched Problem 1, Section 8.3