Calculus III Project: #1 Multivariable Differentiation

Select your project team: (Recommended: 4 students.) Working Sec: ____________

1. Name: ____________________________  Sec: ____________
   Email: ____________________________  Phone: _______________________

2. Name: ____________________________  Sec: ____________
   Email: ____________________________  Phone: _______________________

3. Name: ____________________________  Sec: ____________
   Email: ____________________________  Phone: _______________________

4. Name: ____________________________  Sec: ____________
   Email: ____________________________  Phone: _______________________

Indicate your preference on projects: (1 for first choice down to 8 for last choice.)

10.3  Newton’s Method in 2 Dimensions, requires a Maple program
10.4  Gradient Method of Finding Extrema, requires a Maple program
10.5  Seeing a Blimp
10.6  The Trash Dumpster
10.7  Generalized Diameters
10.8  Locating an Apartment

Minimal Rectangles and Triangles (Stewart p. 792 #5 + similarly w. triangles)

Exact Gradient Method (Stewart p. 793 #11 or p. 866 #2), requires a Maple program
Calculus III Project: #2 Multivariable Integration

Select your project team: (Recommended: 4 students.) Working Sec: ____________

1. Name: ____________________________ Sec: _________
   Email: ____________________________ Phone: __________________

2. Name: ____________________________ Sec: _________
   Email: ____________________________ Phone: __________________

3. Name: ____________________________ Sec: _________
   Email: ____________________________ Phone: __________________

4. Name: ____________________________ Sec: _________
   Email: ____________________________ Phone: __________________

Indicate your preference on projects: (1 for first choice down to 8 for last choice.)

______ 9.9, 9.10  Gauss’ Law and Ampere’s Law
______ 9.11, 9.12  Interpretation of Divergence and Curl
______ 10.9  Skimpy Donut
______ 10.10  Volume Between a Surface and Its Tangent Plane
______ 10.11  Hypervolume of a Hypersphere
______ 10.12  Average Temperatures
______ 10.13  Center of Mass of Planet X
______ 10.14  Steradian Measure