MATH 275: EXAM 3 TOPICS AND PRACTICE PROBLEMS

- Directional derivatives and the gradient vector (section 14.6): # 4, 10, 12, 15, 25, 29, 55

- Minimum and maximum values (section 14.7): # 7, 33, 43, 53

- Lagrange multipliers (section 14.8): # 7, 9, 23

- Double integrals over rectangles (section 15.1): # 3, 9, 16, 17, 19, 21, 25, 27, 29

- Double integrals over general regions (section 15.2): # 1, 7, 16, 21, 25, 47, 53

- Double integrals in polar coordinates (section 15.3): # 5, 8, 17, 19, 22, 31

- Applications of double integrals (section 15.4): # 1, 5, 13, 11, 16, 23, 27

- Surface area (section 15.5): # 5, 7, 9