

MATH 2220 HW6.

Due Wednesday 15 October

(1) Section 3.5, p. 253-255.

(a) # 8.

(b) # 12.

(2) Review Exercises, p. 255-259.

(a) # 5.

(b) # 15.

(c) # 22.

(3) Find the maximum and minimum values of the function $f(x, y) = e^x + e^{-y}$ on the line segment in \mathbb{R}^2 joining $(-1, -1)$ to $(1, 1)$.

(4) Use Lagrange multipliers to show that the distance from the point (x_0, y_0, z_0) to the plane $Ax + By + Cz + D = 0$ is

$$\frac{|Ax_0 + By_0 + Cz_0 + D|}{\sqrt{A^2 + B^2 + C^2}}$$