Assignment # 13

Date

Exercise 13.1

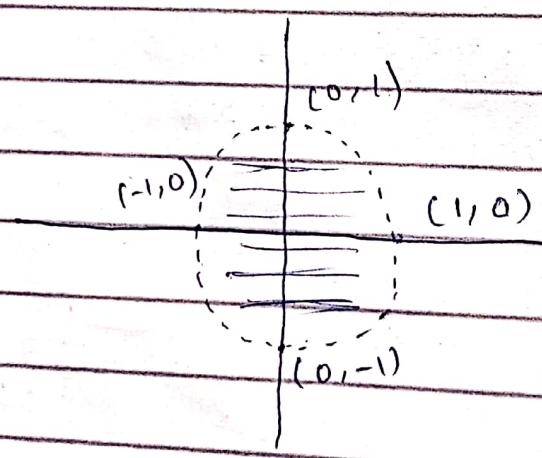
Q23

$$f(x,y) = \ln(1-x^2-y^2)$$

$$1-x^2-y^2 \not\geq 1 \qquad 1-x^2-y^2 > 0$$

$$0 \geq x^2+y^2 \qquad x^2+y < 1$$

$$x^2+y^2 \leq 0$$



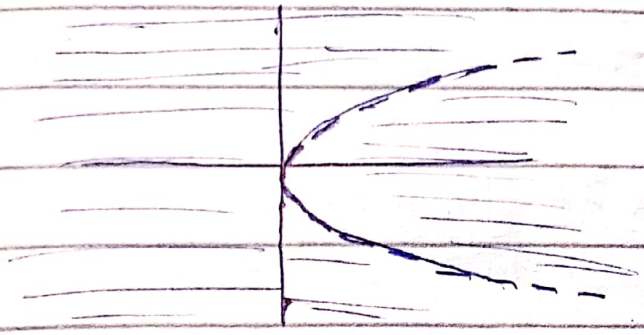
Q25

$$f(x,y) = \frac{1}{x-y^2}$$

$$x - y^2 \neq 0$$

$$x \neq y^2$$

Date



Q27

a) $f(x,y) = xe^{-\sqrt{y+2}}$

$$y+2 \geq 0$$

$$y \geq -2$$

All the points above or on the line $y = -2$

b) $f(x,y,z) = \sqrt{25 - x^2 * - y^2 - z^2}$

$$25 - x^2 - y^2 - z^2 \geq 0$$

$$x^2 + y^2 + z^2 \leq 25$$

All the points inside or on the sphere $x^2+y^2+z^2 = 25$

c) $f(x,y,z) = e^{xyz}$

All points in three space.