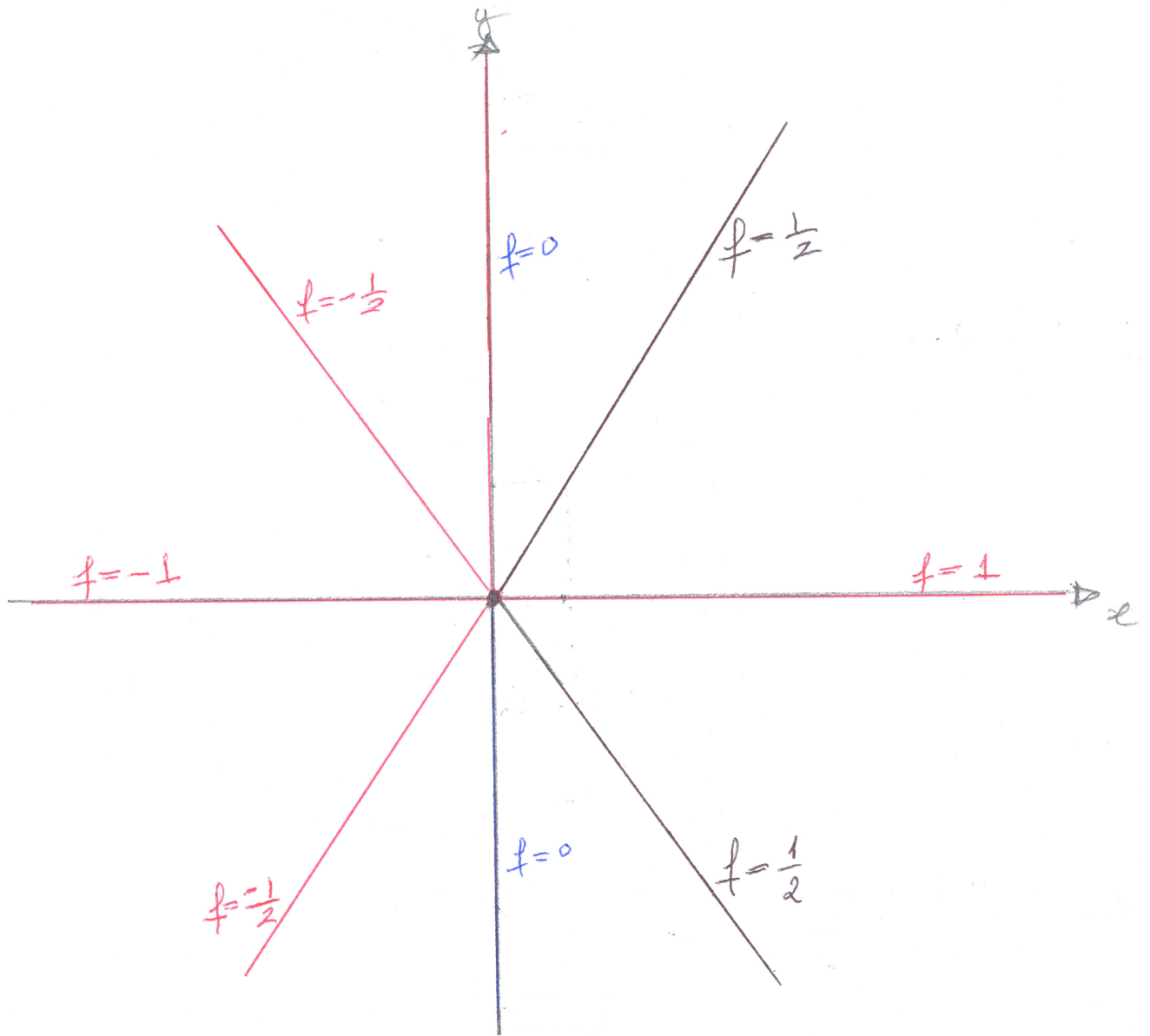


Questão 3a , P1 Calc 2, Quinica, 2015.



Curvas de Nível de  $f(x,y) = \frac{x}{\sqrt{x^2+y^2}}$ ,  $(x,y) \neq (0,0)$

$$\frac{x}{\sqrt{x^2+y^2}} = -1 \Leftrightarrow y=0 \text{ e } x < 0$$

$$\frac{x}{\sqrt{x^2+y^2}} = \pm \frac{1}{2} \Leftrightarrow y^2 = 3x^2 \text{ e } x < 0 \Leftrightarrow \begin{cases} y = \sqrt{3}x \text{ ou } y = -\sqrt{3}x \\ \text{e } x < 0 \end{cases}$$

$$\frac{x}{\sqrt{x^2+y^2}} = 0 \Leftrightarrow x = 0$$

$$\frac{x}{\sqrt{x^2+y^2}} = 1 \Leftrightarrow y=0 \text{ e } x > 0$$