

26. a) $-0,366 + j1,366$

b) $1,366 + j0,366$

c) $1,366 - j0,366$

d) $-0,366 - j1,366$

e) $-0,5 + j0,866$

f) $j2$

g) $2 - j$

27. a) 1,414; b) 4,472; c) 0,849; d) 6,325; e) 8

28. j

29. 16

30. -1024

31. $0,5 - j0,866$

32. $-\frac{1}{1024}$

33. $2,828 - j2,828$

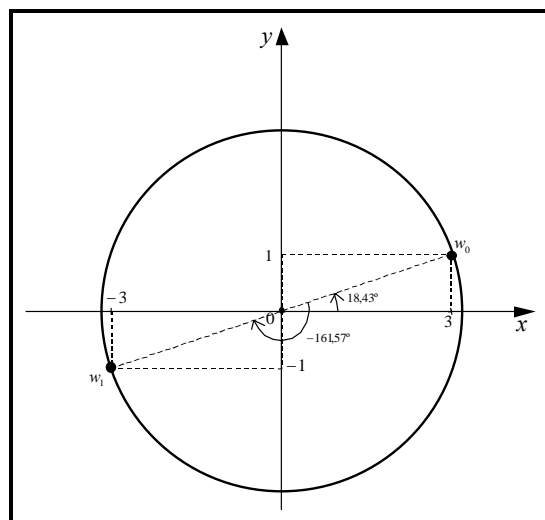
34. $n = 3$

35. -2

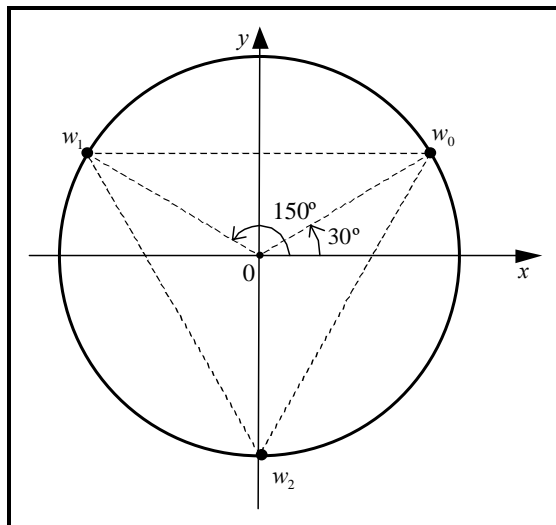
36. $-j$

37. 17

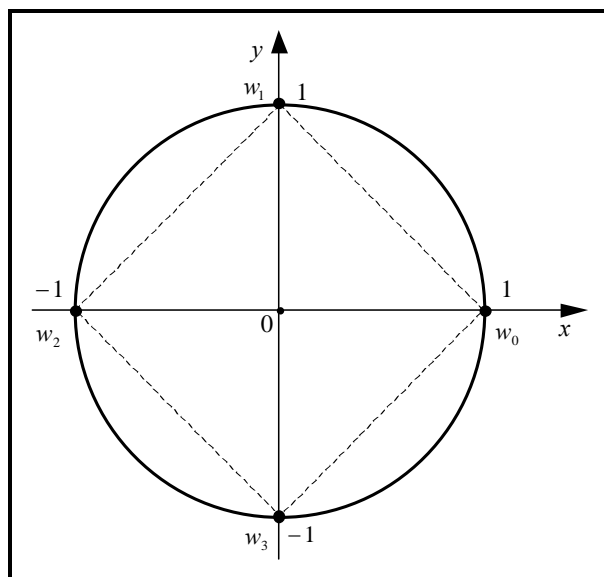
38. a) $w_0 = 3 + j$; $w_1 = -3 - j$



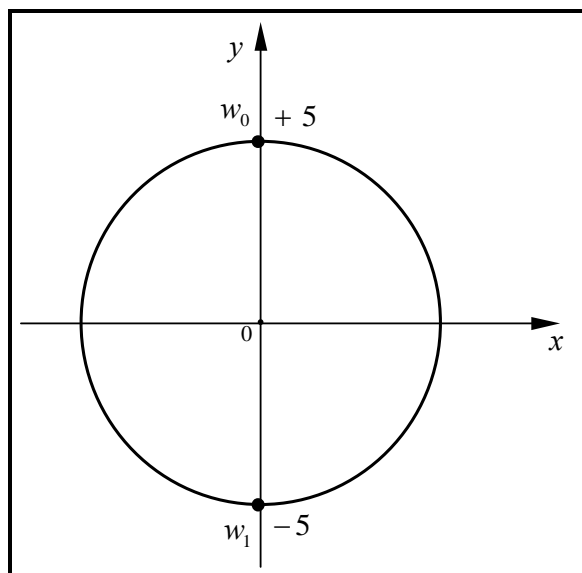
b) $w_0 = 0,866 + j0,5$; $w_1 = -0,866 + j0,5$; $w_2 = -j$



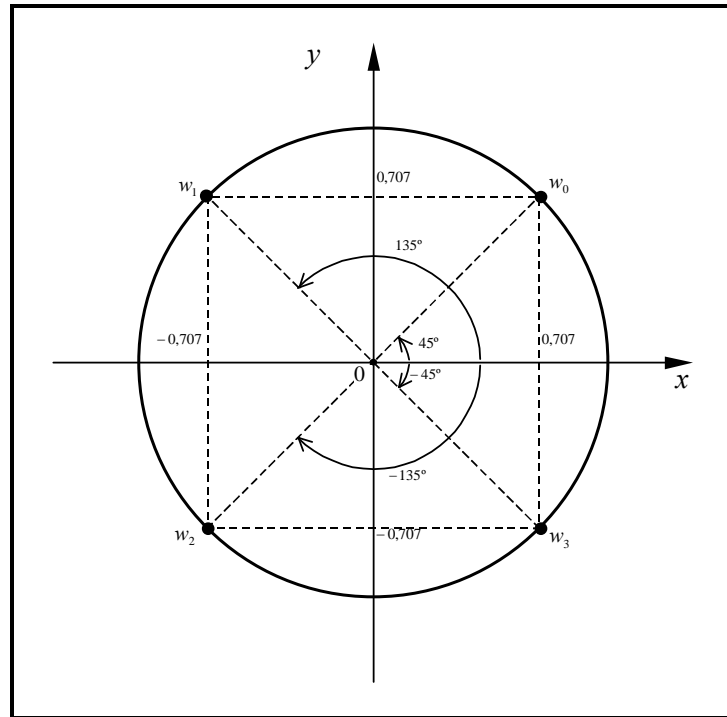
c) $w_0 = 1$; $w_2 = j$; $w_3 = -1$; $w_4 = -j$



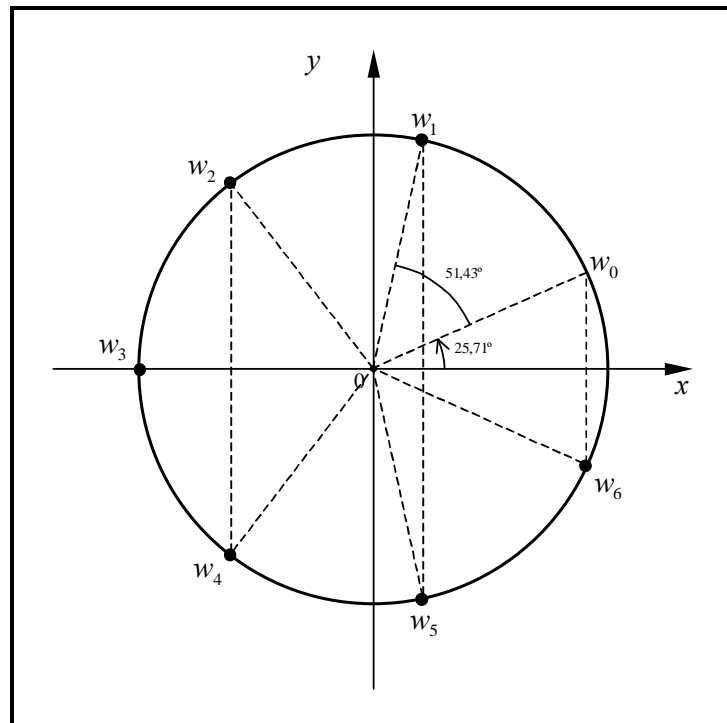
d)



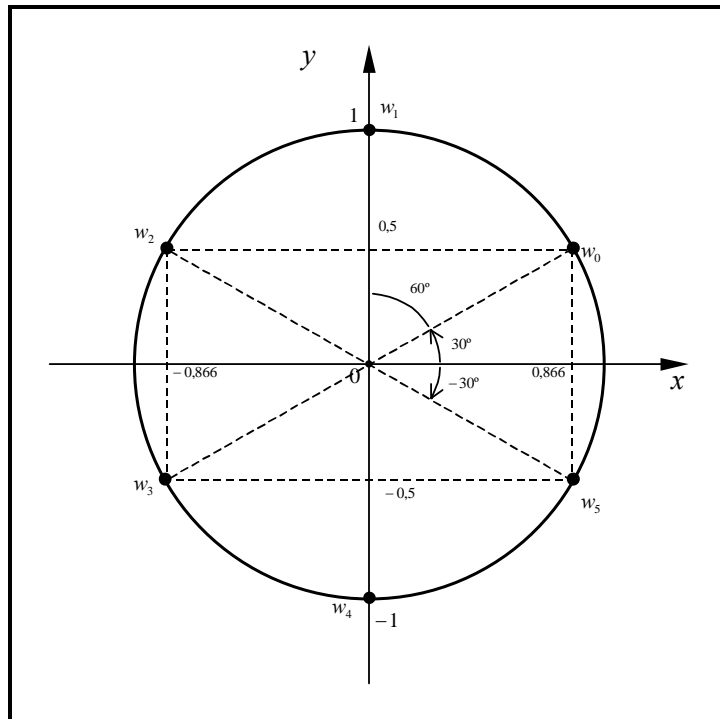
- e) $w_0 = 0,707 + j0,707$; $w_1 = -0,707 + j0,707$; $w_2 = -0,707 - j0,707$; $w_3 = 0,707 - j0,707$



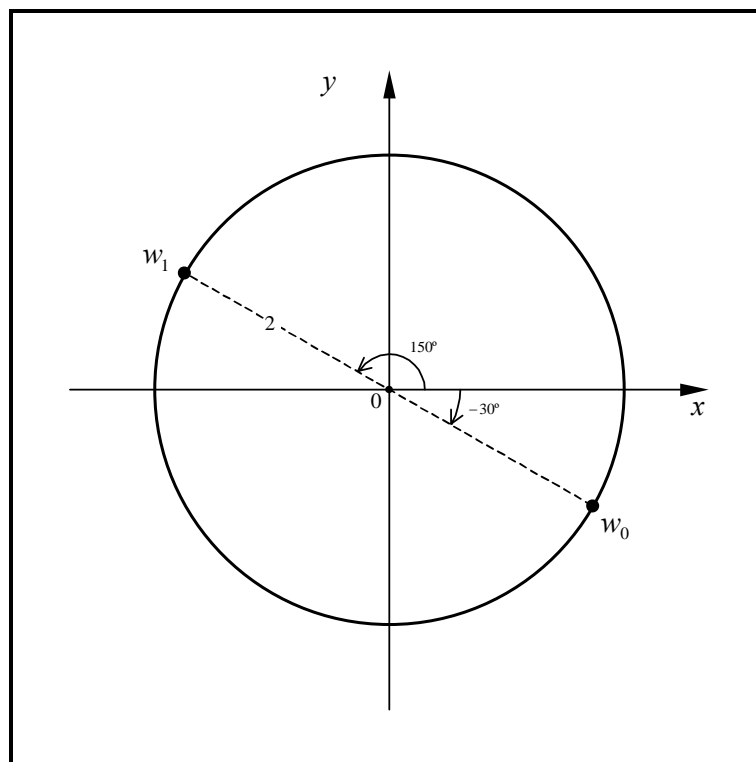
- f) $w_0 = 1,802 + j0,868$; $w_1 = 0,445 + j1,950$; $w_2 = -1,247 + j1,564$; $w_3 = -2$; $w_4 = -1,247 - j1,564$; $w_5 = -0,445 - j1,950$; $w_6 = 1,802 + j0,868$



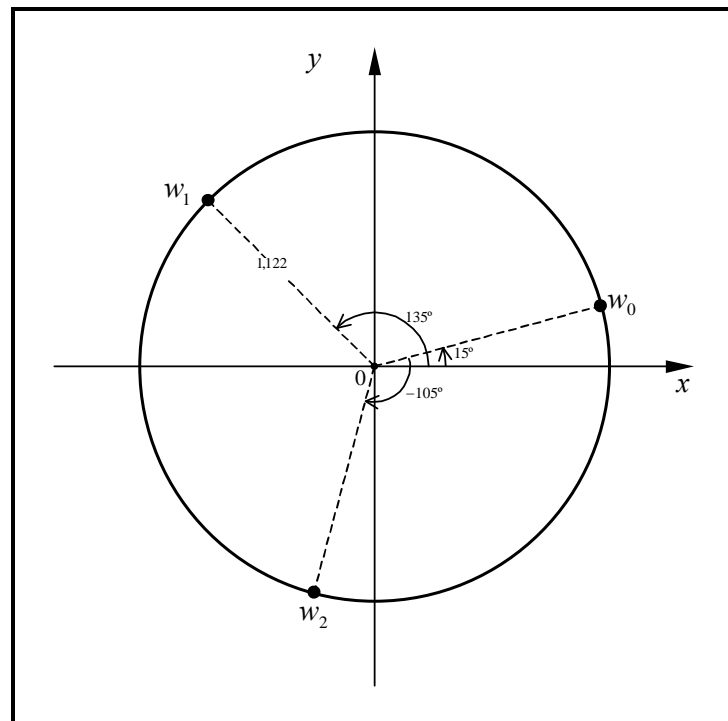
- g) $w_0 = 0,866 + j0,5$; $w_1 = j$; $w_2 = -0,866 + j0,5$; $w_3 = -0,866 - j0,5$; $w_4 = -j$; $w_5 = 0,866 - j0,5$



- h) $w_0 = 1,225 - j0,707$; $w_1 = -1,225 + j0,707$



i) $w_0 = 1,181 + j0,316$; $w_1 = -0,864 + j0,864$; $w_2 = -0,316 + j1,181$



39. a) $\{j, -j\}$;

b) $\{0,5 + j0,866; -1; 0,5 - j0,866\}$

c) $\{0,707 + j0,707; -0,707 + j0,707; -0,707 - j0,707; 0,707 - j0,707\}$

d) $\{-0,707 + j0,707; 0,707 - j0,707\}$

e) $\{-0,5 + j0,866; -0,5 - j0,866\}$

f) $\{2 + j7; 2 - j7\}$

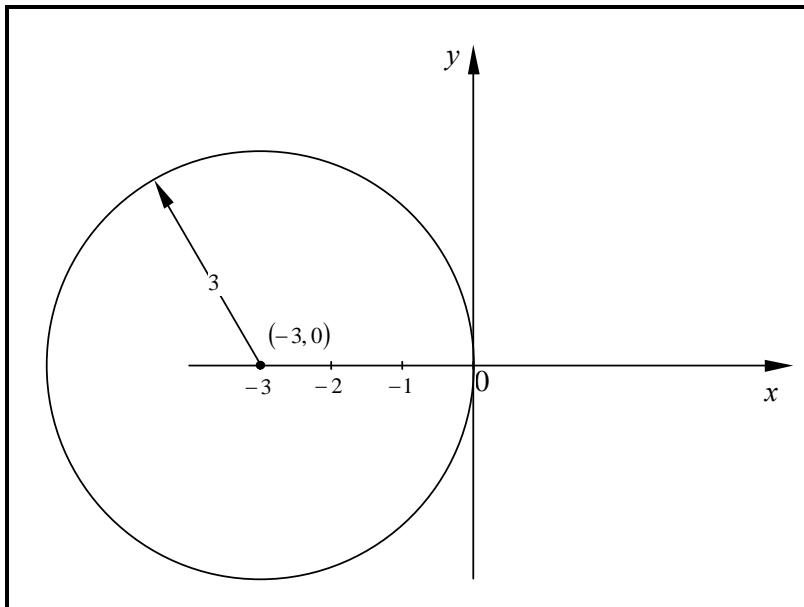
g) $\{1 + j; 1 - j2\}$

h) $\{-1; 1; -\sqrt{2}; \sqrt{2}\}$

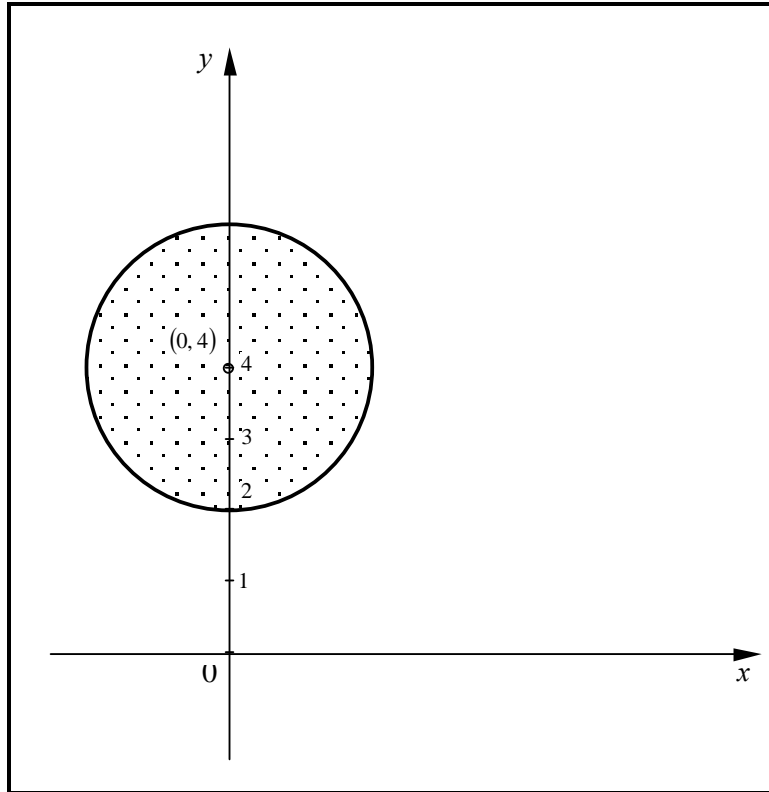
i) $\{1; -1; j2; -j2\}$

j) $\{2; -2; j2; -j2\}$

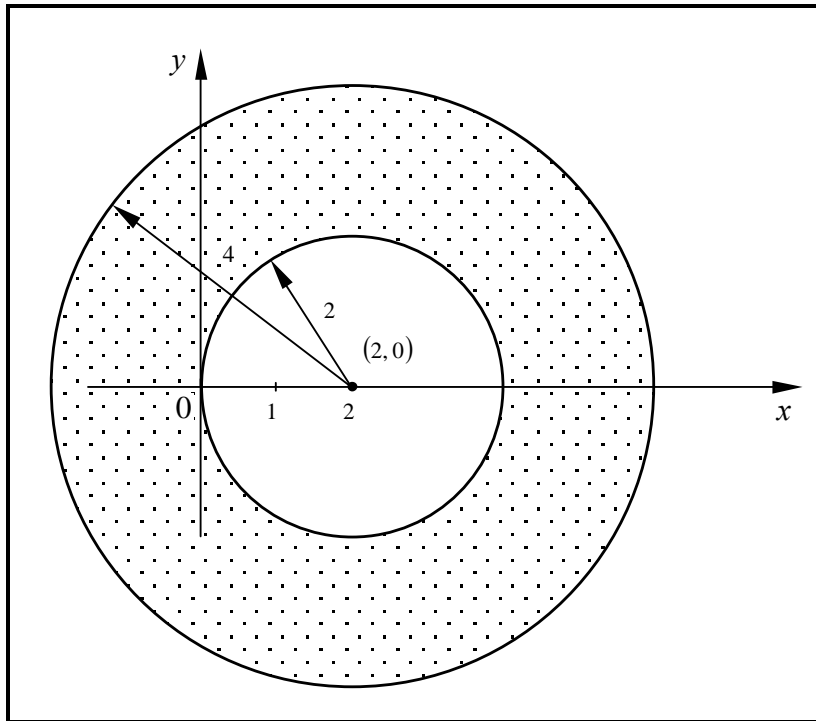
41. a) $(x+3)^2 + y^2 = 9 \rightarrow$ circunferência centrada em $(-3, 0)$ e raio 3.



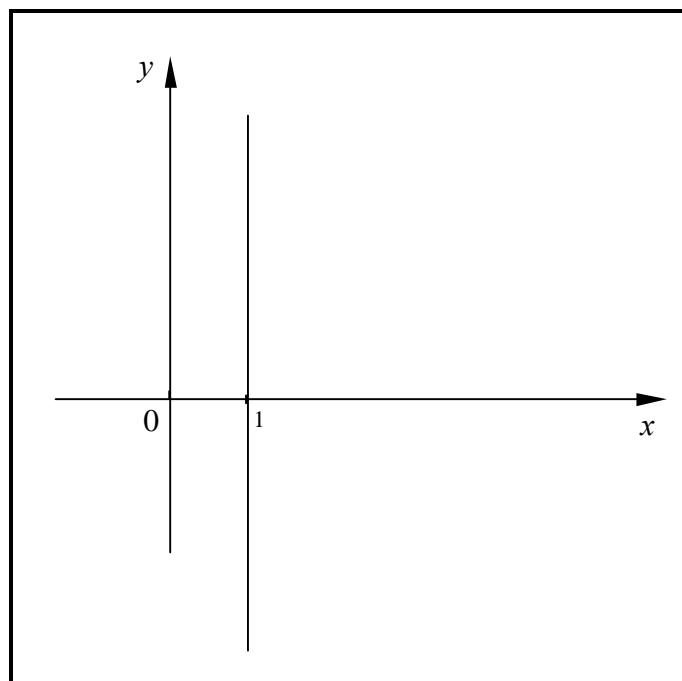
b) $x^2 + (y-4)^2 \leq 4 \rightarrow$ disco fechado centrado em $(0, 4)$ e raio 2.



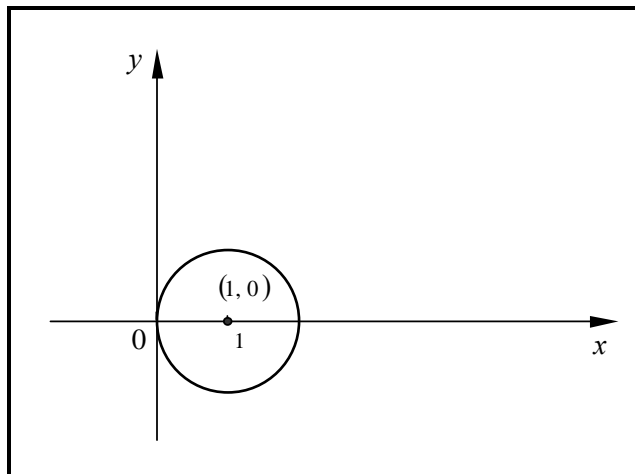
- c) $4 \leq (x - 2)^2 + y^2 \leq 16 \rightarrow$ coroa fechada centrada em $(2, 0)$, raio interno 2 e raio externo 4.



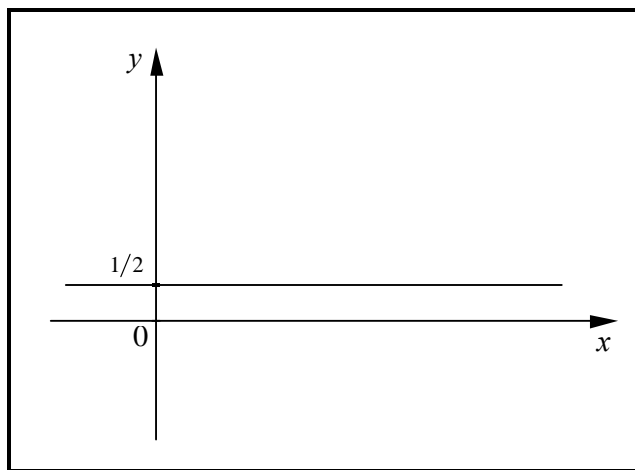
- d) $x = 1 \rightarrow$ reta que passa pelo ponto $(1, 0)$ e é paralela ao eixo y .



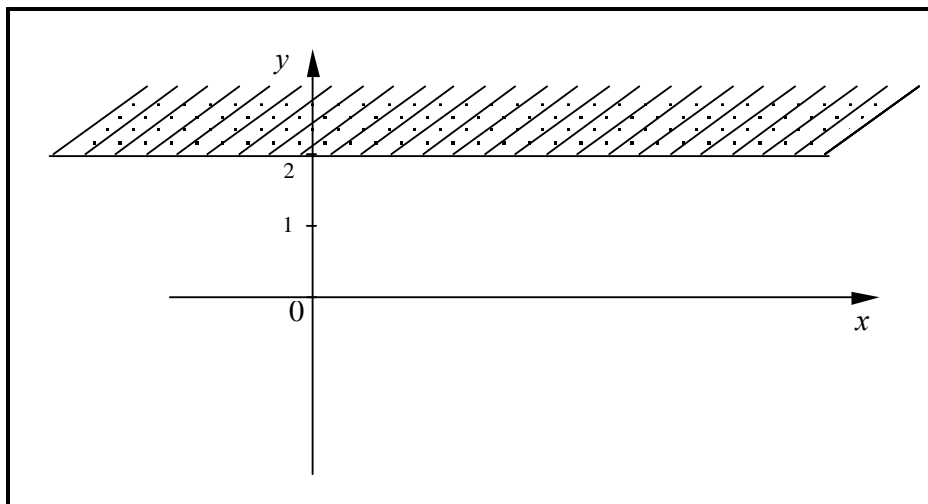
e) $(x-1)^2 + y^2 = 1 \rightarrow$ circunferência centrada em $(1, 0)$ e raio 1.



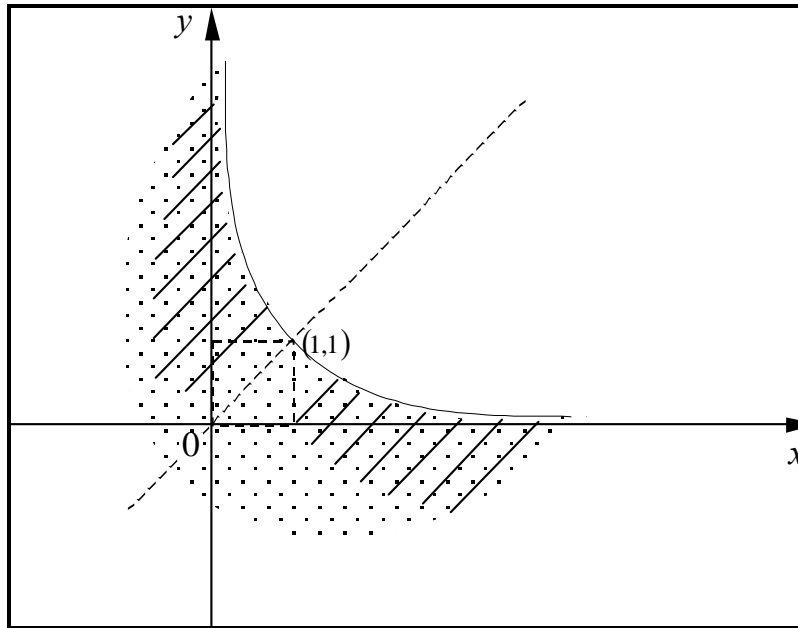
f) $y = \frac{1}{2} \rightarrow$ reta que passa pelo ponto $(0, \frac{1}{2})$ e é paralela ao eixo x .



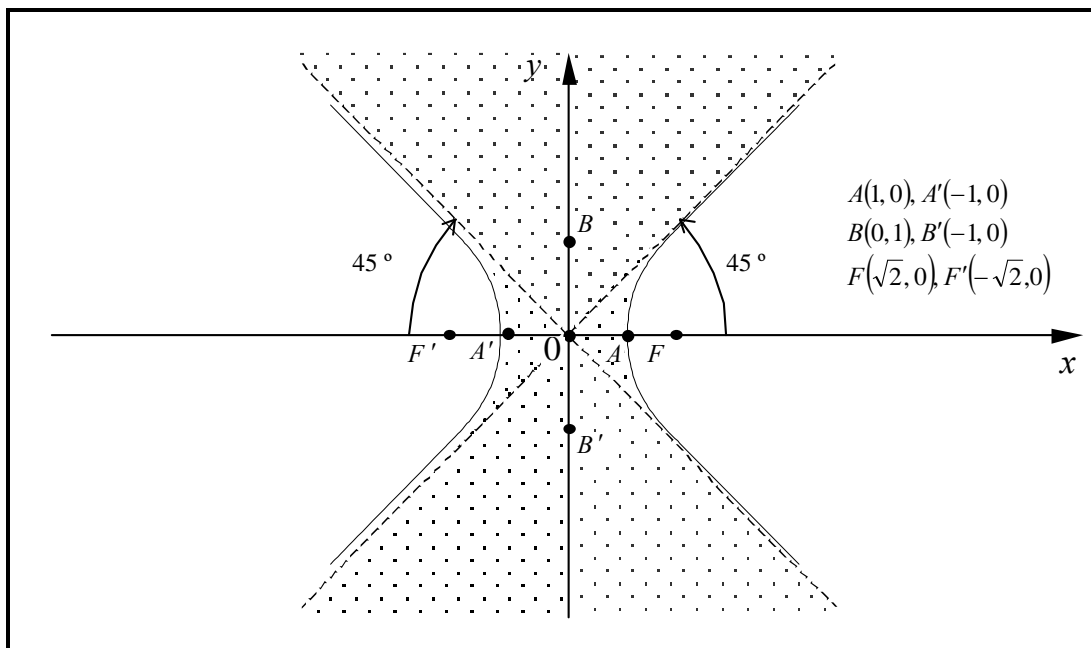
g) $y \geq 2 \rightarrow$ semiplano situado acima da reta $y = 2$ e incluindo a mesma.



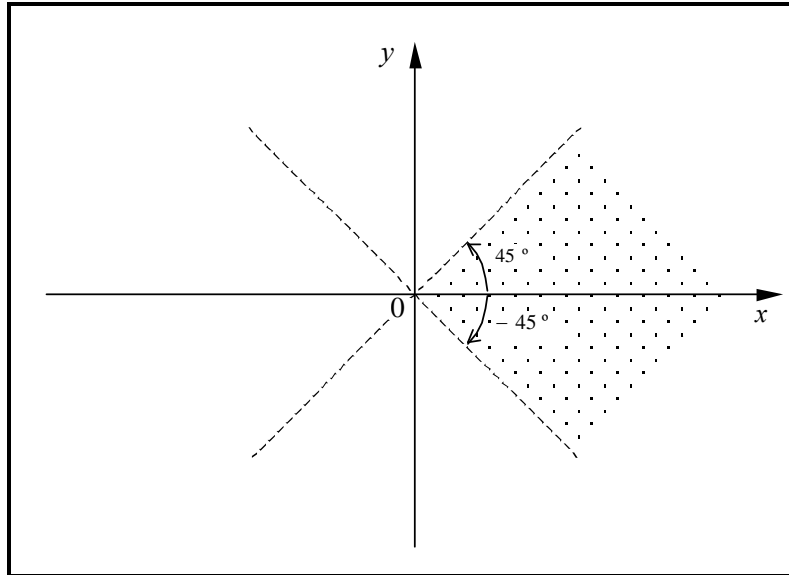
- h) $xy \leq 1 \rightarrow$ região delimitada pela hipérbole equilátera $xy = 1$ conforme aparece na figura a seguir



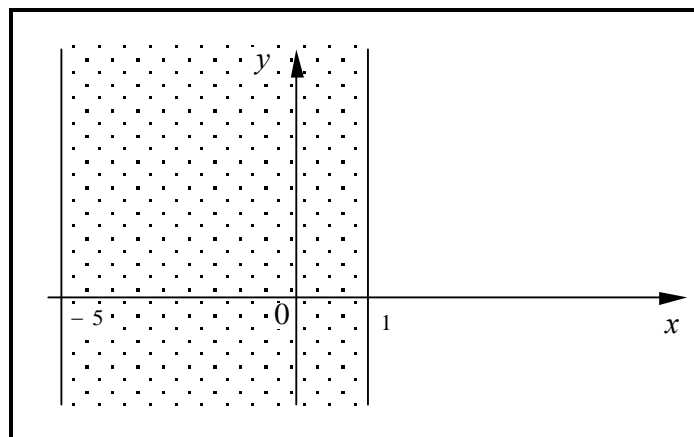
- i) $x^2 - y^2 \leq 1 \rightarrow$ região entre os ramos da hipérbole $x^2 - y^2 = 1$ incluindo tais ramos.



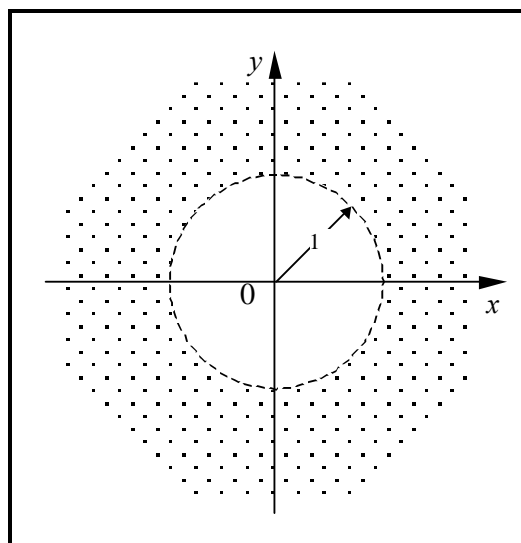
j) $-45^\circ < \theta < 45^\circ \rightarrow$ região entre as retas $y = -x$ e $y = x$ no 1.º e 4.º quadrantes.



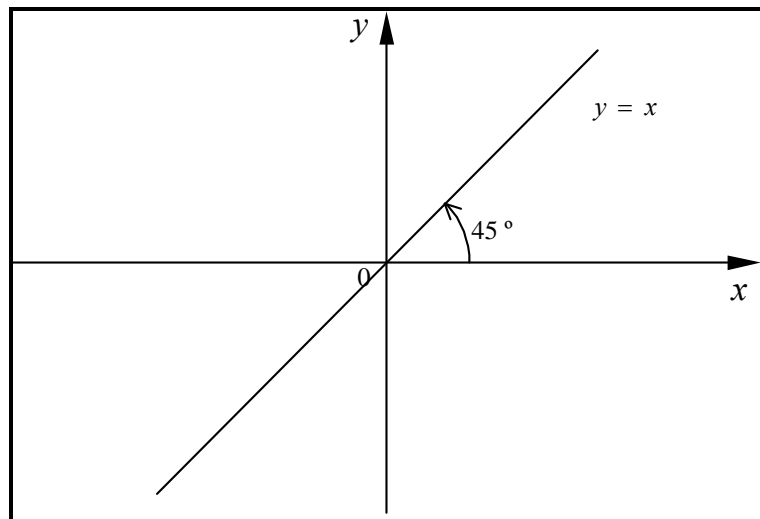
k)



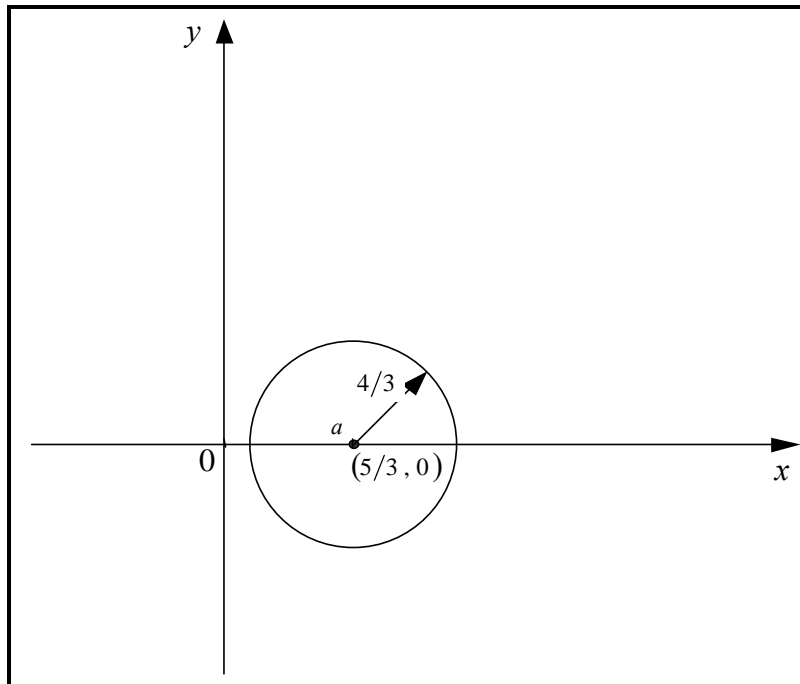
l) $x^2 + y^2 > 1 \rightarrow$ região exterior à circunferência $x^2 + y^2 = 1$.



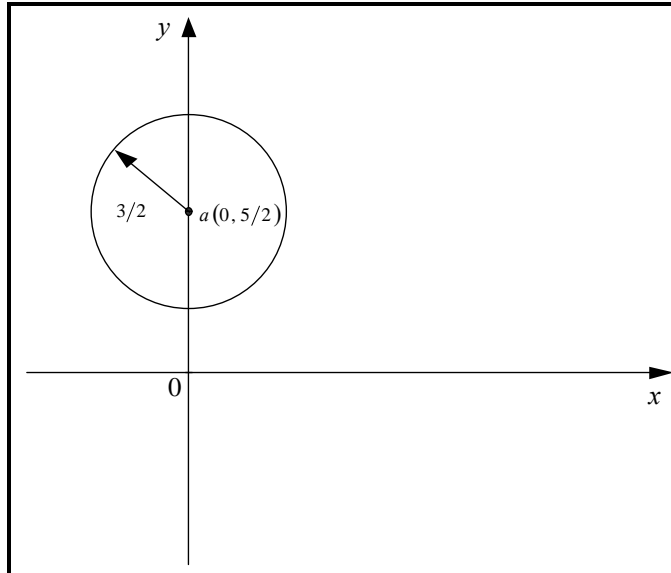
m) Reta bissetriz do 1.º e 3.º quadrantes.



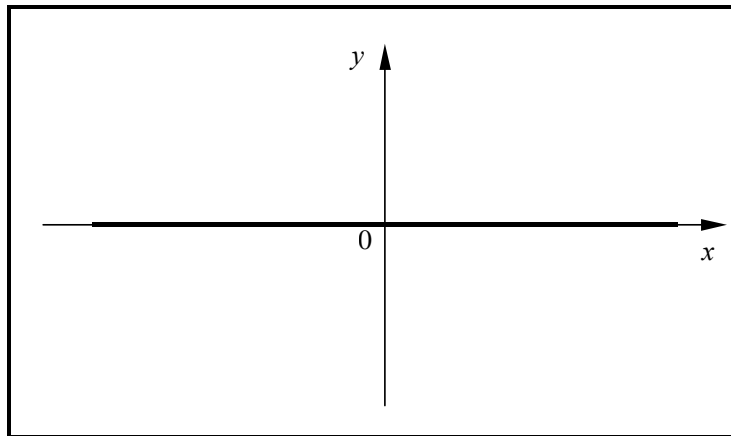
n) $\left(x - \frac{5}{3}\right)^2 + y^2 = \left(\frac{4}{3}\right)^2 \rightarrow$ circunferência de centro $a\left(\frac{5}{3}, 0\right)$ e raio $\frac{4}{3}$.



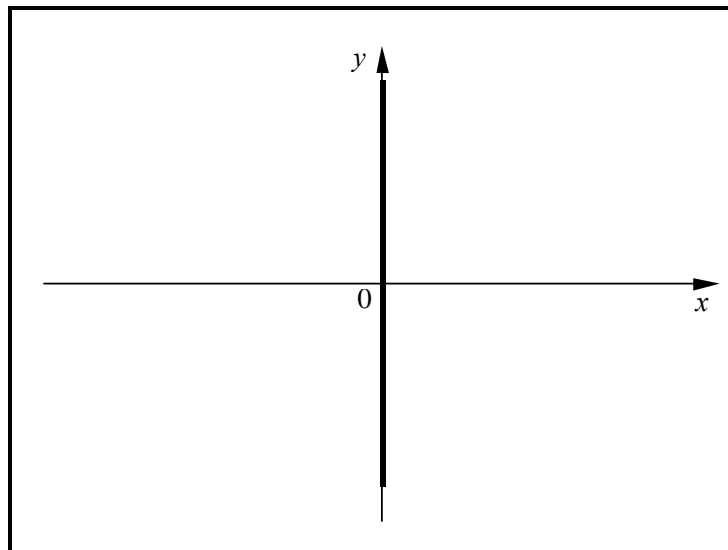
o) $x^2 + \left(y - \frac{5}{2}\right)^2 = \left(\frac{3}{2}\right)^2 \rightarrow$ circunferência de centro $a(0, \frac{5}{2})$ e raio $\frac{3}{2}$.



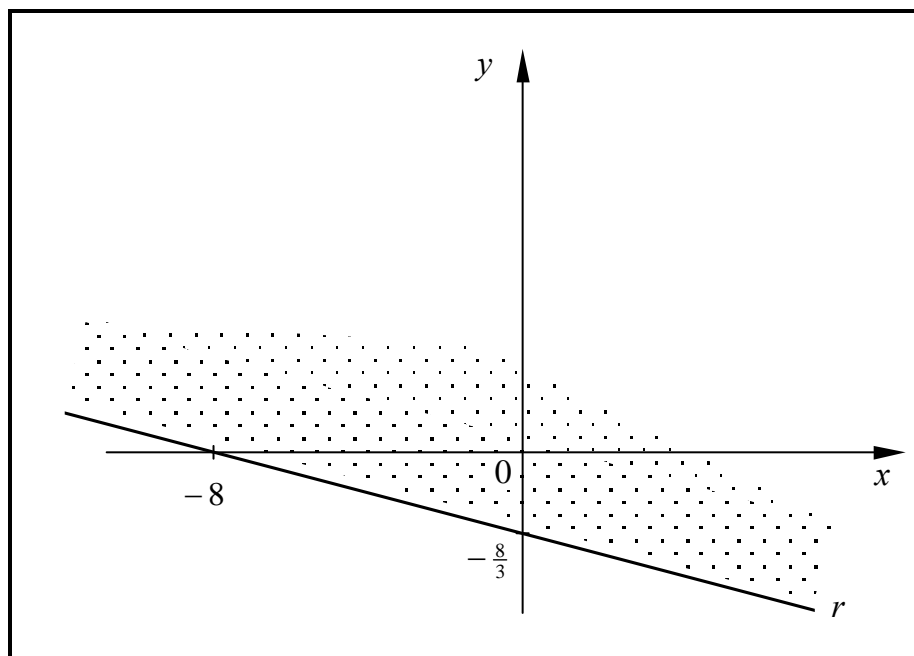
p) $y = 0 \rightarrow$ eixos dos x .



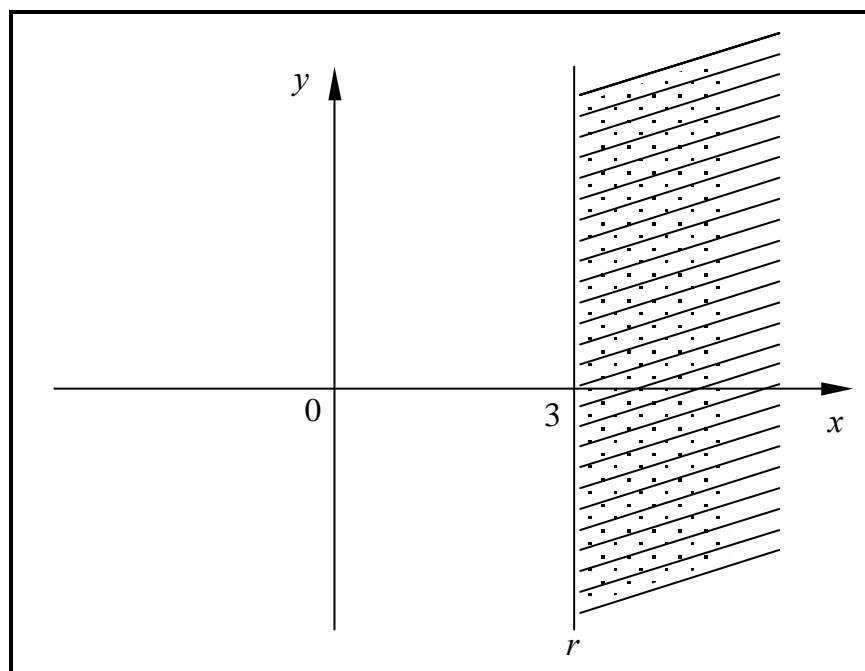
q) $x = 0 \rightarrow$ eixos dos y .



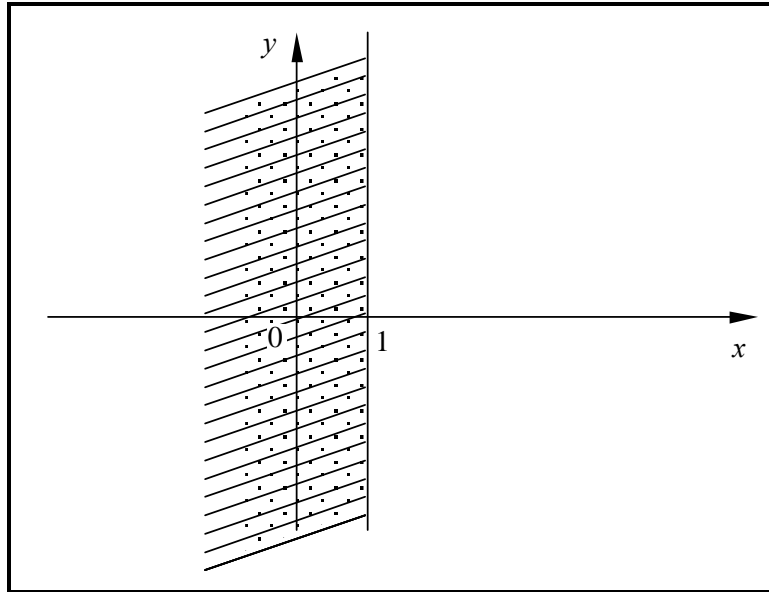
r) $x + 3y + 8 \geq 0 \rightarrow$ que inclui o semiplano e a reta(r) assinalados na figura.



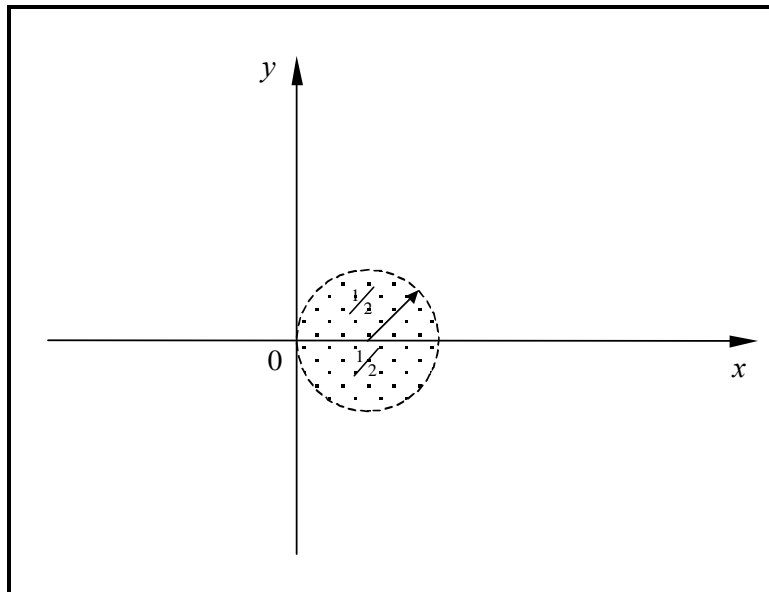
s) $x \geq 3 \rightarrow$ que inclui o semiplano e a reta r assinalados na figura.



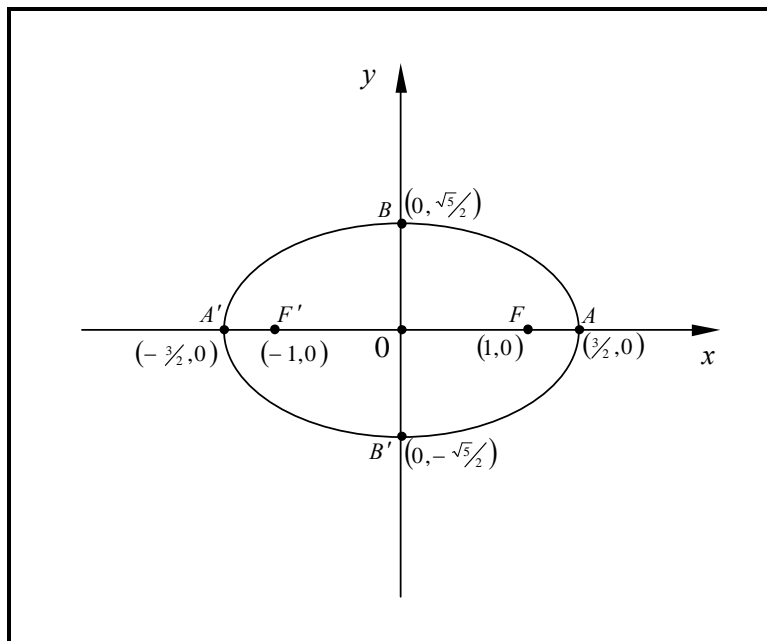
t) $x < -1 \rightarrow$ que representa o semiplano assinalado.



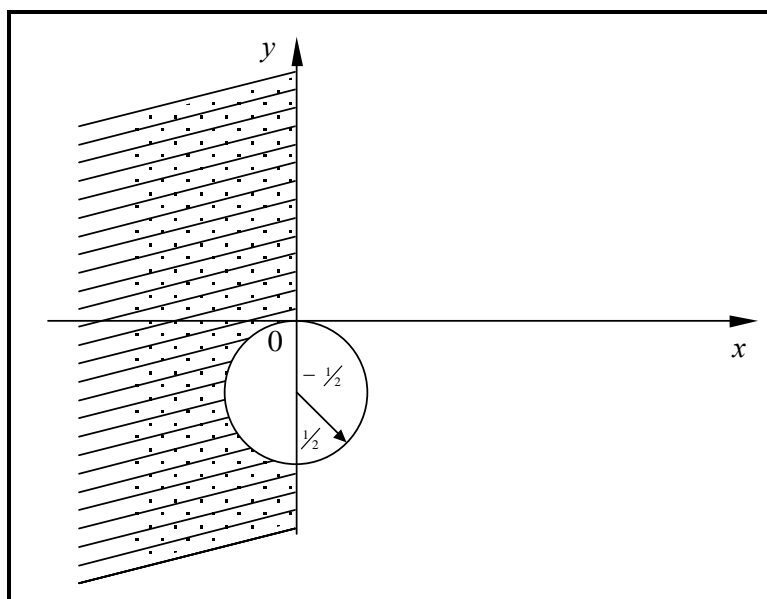
u) $\left(x - \frac{1}{2}\right)^2 + y^2 < \left(\frac{1}{2}\right)^2 \rightarrow$ disco aberto de centro $a(\frac{1}{2}, 0)$ e raio $\frac{1}{2}$.



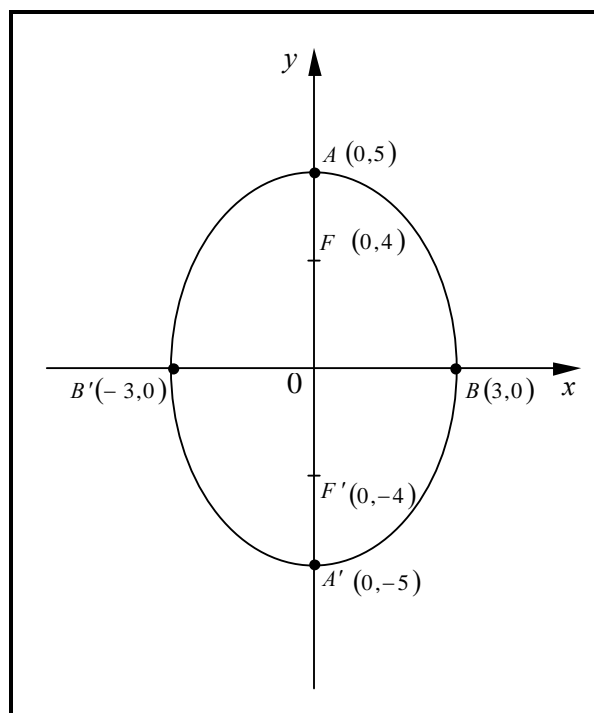
- v) $\frac{x^2}{9} + \frac{y^2}{5} = 1 \rightarrow$ elipse centrada na origem, com eixo maior = 3, eixo menor = $\sqrt{5}$, e distância focal = 2.



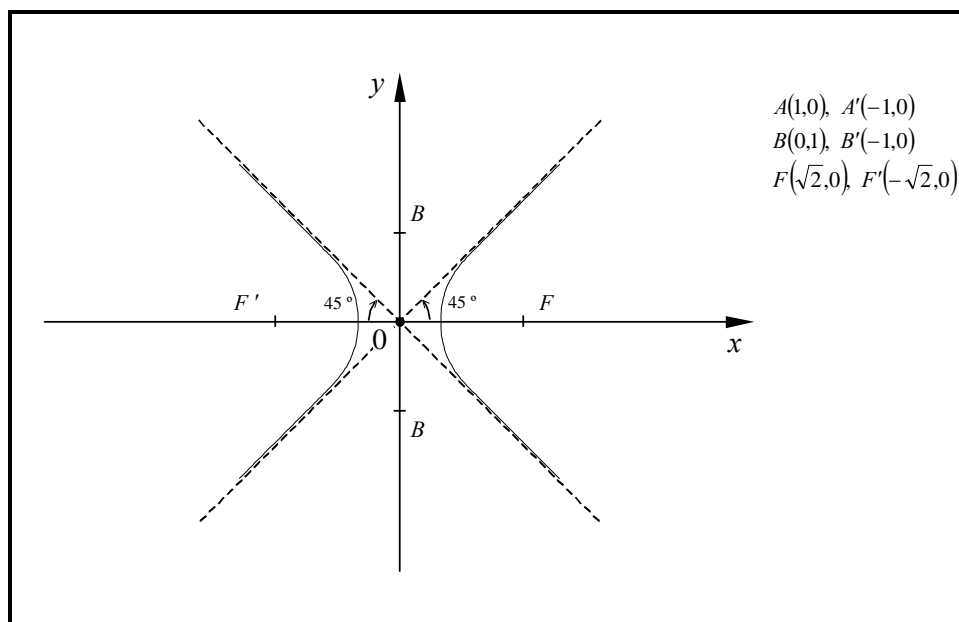
- w) As equações que definem o lugar geométrico são $y < 0$ e $x^2 + \left(y + \frac{1}{2}\right)^2 > \left(\frac{1}{2}\right)^2$. Logo temos o todo semiplano a esquerda do eixo $y = 0$ a menos da parte do disco fechado de centro $a\left(0, -\frac{1}{2}\right)$ e raio $\frac{1}{2}$ situada nesta região.



- x) $\frac{x^2}{9} + \frac{y^2}{25} = 1 \rightarrow$ elipse centrada na origem, com eixo maior = 10, eixo menor = 6, e distância focal = 8.



- y) $x^2 - y^2 = 1 \rightarrow$ que é uma hipérbole equilátera, centrada na origem, cujo eixo real = 2, e eixo imaginário = 2, e a distância focal = $2\sqrt{2}$.



- z) $z = \alpha z_1 + \beta z_2 \rightarrow$ sendo $\alpha + \beta = 1$, representa o segmento que une os pontos determinados por z_1 e z_2 .