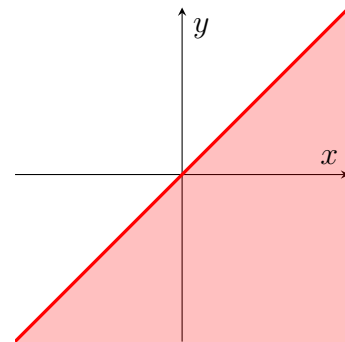
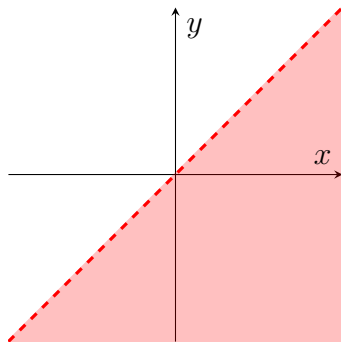




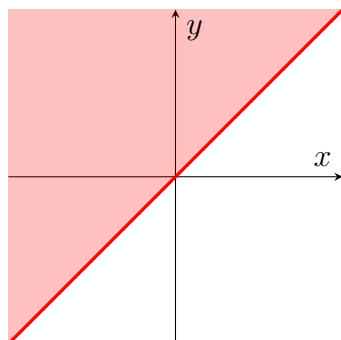
MTM3100 - Pré-cálculo

Gabarito parcial da 8ª lista complementar de exercícios

1. (a) $-2, -1, 2, 4$; (b) $-1, 0, \frac{1}{2}, 1, \sqrt{2}$;
(c) $-2, -1, 0, \frac{1}{2}, 1, \sqrt{2}, 4$; (d) $-2, -1, 0, \frac{1}{2}, 1, \sqrt{2}, 2, 4$.
2. (a) 4; (b) (c) $-2, 2$.
3. (a) $S = \{(x, y) \in \mathbb{R}^2 \mid x - y > 0\}$.
(b) $S = \{(x, y) \in \mathbb{R}^2 \mid x - y \geq 0\}$;
(c) $S = \{(x, y) \in \mathbb{R}^2 \mid x - y \leq 0\}$.
4. (a) (b)



(c)



5. (a) $S = \{x \in \mathbb{R} \mid 2x^2 - 1 > x \text{ e } 2x + 4 < 0\}$;
(b) $S = \{x \in \mathbb{R} \mid 3x - 6 > 3 \text{ e } 3x - 6 < 10\}$.

6. $S = \{x \in \mathbb{R} \mid 3x - 6 > 3 \text{ e } 3x - 6 < 10\} = (3, 16/3)$.
7. (a) $S = (-\infty, -5/2]$; (b) (c) $S = (-\infty, 2]$; (d) (e) $S = (-\infty, 5/2]$; (f) $S = [1, \infty)$; (g) $S = (16/3, \infty)$; (h) (i) $S = (-\infty, 1/3]$; (j) (k) $S = (-\infty, -10]$; (l) $S = [-3/4, \infty)$; (m) $S = [7, \infty)$; (n) $S = (-\infty, 0)$.
8. (a) $S = [3, 6]$; (b) (c) $S = (-10/3, -13/6]$; (d) $S = [11/12, 13/6]$.
9. (a) $S = [1, 2]$; (b) $S = \emptyset$.
10. (a) $S = (-\infty, -5/2) \cup (2, \infty)$; (b) (c) $S = (-2/3, 4/3) \cup (6, \infty)$; (d) $S = [1/4, 5/3] \cup [7/2, \infty)$.
11. (a) $S = (-\infty, 1/7]$; (b) $S = \mathbb{R}$; (c) (d) $S = (-\infty, 0) \cup (0, 1) \cup (3, 4) \cup (4, \infty)$.
12. (a) $S = (-1/5, 3/4]$; (b) (c) $S = (-\infty, 7/8) \cup (4/3, \infty)$; (d) (e) $S = (-3, 15]$; (f) (g) $S = (-\infty, -4/5] \cup [-1/4, 5/4]$; (h) $S = (-3, 4) \cup (11, \infty)$; (i) $S = (-4, -2)$; (j) $S = (-\infty, 1) \cup (3/2, 2) \cup (3, \infty)$.
13. (a) $S = \{1\}$; (b) $S = (-\infty, 1) \cup (2, \infty)$; (c) (d) (e) (f) $S = \mathbb{R}$; (g) $S = \emptyset$.
14. $A \cap B = \emptyset$,
 $A \cup B = (-\infty, 2] \cup (3, \infty)$,
 $A - B = [1, 2]$,
 $B - A = (-\infty, 1) \cup (3, \infty)$.
15. (a) $S = \left(\frac{c(a+b)}{ab}, \infty\right)$; (b) $S = \left(\frac{a-c}{b}, \frac{2a-c}{b}\right)$.
- 16.
17. (a) $x \in (-\infty, 2]$; (b) $x \in \mathbb{R}$; (c) $x \in (-\infty, 2] \cup [3, \infty)$.