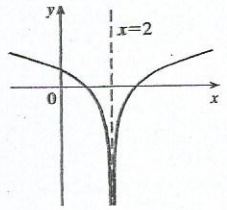
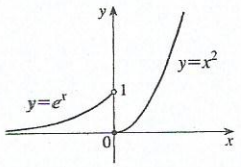
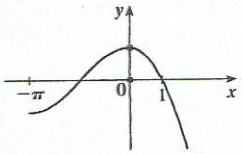
15. $f(2)$ não está definido. **17.** $\lim_{x\to 0} f(x)$ não existe.



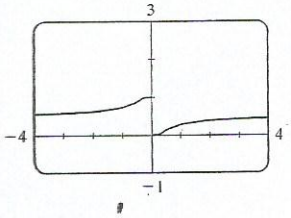


19. $\lim_{x\to 0} f(x) \neq f(0)$ **21.** $\{x \mid x \neq -\frac{1}{2}, \frac{1}{3}\}$



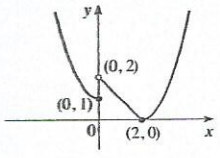
23. $[\frac{1}{2}, \infty)$ **25.** $(-\infty, \infty)$ **27.** $(-\infty, -1) \cup (1, \infty)$

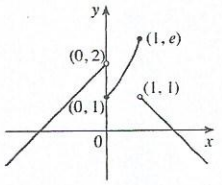
29. $x = 0$



31. $\frac{7}{3}$ **33.** 1

37. 0, à esquerda **39.** 0, à direita; 1, à esquerda





41. $\frac{2}{3}$ **43.** (a) $g(x) = x^3 + x^2 + x + 1$ (b) $g(x) = x^2 + x$

51. (b) (0,44, 0,45) **53.** (b) 70,347

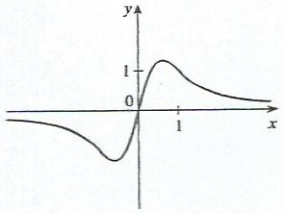
59. Nenhum **61.** Sim

EXERCÍCIOS 2.6 ■ PÁGINA 127

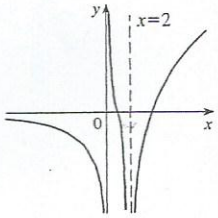
1. (a) Quando x se torna grande, $f(x)$ tende a 5.
(b) Quando x se torna um negativo grande (em módulo), $f(x)$ tende a 3.

3. (a) ∞ (b) ∞ (c) $-\infty$ (d) 1 (e) 2
(f) $x = -1, x = 2, y = 1, y = 2$

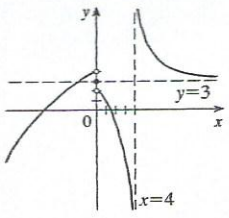
5.



7.



9.



11. 0 **13.** $\frac{3}{2}$ **15.** 0 **17.** $-\frac{1}{2}$ **19.** $\frac{1}{2}$ **21.** 2

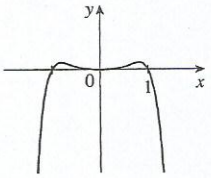
23. 3 **25.** $\frac{1}{6}$ **27.** $\frac{1}{2}(a - b)$ **29.** ∞ **31.** $-\infty$

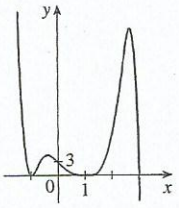
33. $-\frac{1}{2}$ **35.** 0 **37.** (a), (b) $-\frac{1}{2}$ **39.** $y = 1, x = -4$

41. $y = 2; x = -2, x = 1$ **43.** $x = 5$ **45.** $y = 3$

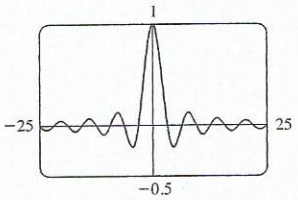
47. $f(x) = \dfrac{2 - x}{x^2(x - 3)}$

49. $-\infty, -\infty$ **51.** $-\infty, \infty$



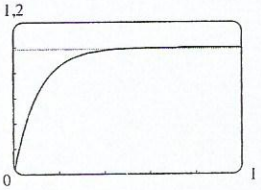


53. (a) 0 (b) Um número infinito de vezes



55. (a) 0 (b) $\pm\infty$ **57.** 5

59. (a) v^* (b)



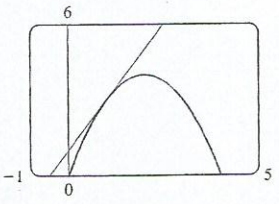
$\approx$ 0,47 s

61. $N \geq 15$ **63.** $N \leq -6, N \leq -22$ **65.** (a) $x > 100$

EXERCÍCIOS 2.7 ■ PÁGINA 136

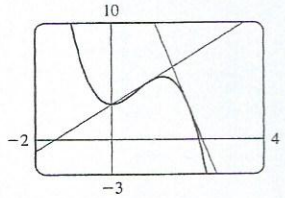
1. (a) $\dfrac{f(x) - f(3)}{x - 3}$ (b) $\lim_{x\to 3} \dfrac{f(x) - f(3)}{x - 3}$

3. (a) 2 (b) $y = 2x + 1$ (c)



5. $y = -x + 5$ **7.** $y = \frac{1}{2}x + \frac{1}{2}$

9. (a) $8a - 6a^2$ (b) $y = 2x + 3, y = -8x + 19$
(c)



11. (a) À direita: $0 < t < 1$ e $4 < t < 6$; à esquerda: $2 < t < 3$; permanecendo parado: $1 < t < 2$ e $3 < t < 4$