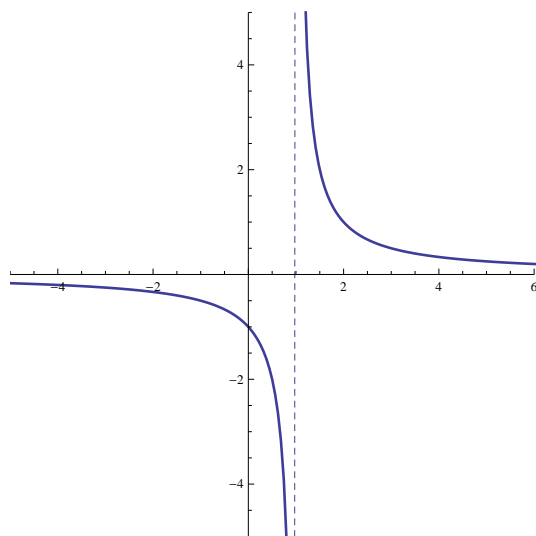


**Gabarito da 3ª Lista de Exercícios de Cálculo Diferencial e Integral I**  
**Profª. Mirela - Tutor: Jairo**

- |  |                          |                          |
|--|--------------------------|--------------------------|
| 1. (a) $1/12$                          | (f) $0$                  | (k) $0$                  |
| (b) $1/4$                              | (g) $-6$                 | (l) $3/7$                |
| (c) $1/2$                              | (h) $\sqrt{\frac{6}{5}}$ | (m) $1/2$                |
| (d) $0$                                | (i) $-3/2$               | (n) $\frac{\sqrt{2}}{4}$ |
| (e) $3x^2$                             | (j) $x^2$                | (o) $2$                  |
|  |                          |                          |
| 2. (a) $3$                             | (b) $0$                  | (c) $7/3$                |
|  |                          |                          |
| 3. $2$                                 |                          |                          |
|  |                          |                          |
| 4.                                     |                          |                          |
|  |                          |                          |
| 5. (a) $1$                             | (f) $0$                  | (k) $1$                  |
| (b) $3$                                | (g) $0$                  | (l) $-1$                 |
| (c) $0$                                | (h) $0$                  | (m) $3$                  |
| (d) $3/4$                              | (i) $0$                  | (n) $2/3$                |
| (e) $0$                                | (j) $0$                  |                          |
|  |                          |                          |
| 6. Basta tomar $\delta = \epsilon^n$ . |                          |                          |
|  |                          |                          |
| 7. (a) $+\infty$                       | (f) $-1$                 | (k) $0$                  |
| (b) $2$                                | (g) $-5/3$               | (l) $-\infty$            |
| (c) $1$                                | (h) $2$                  | (m) $+\infty$            |
| (d) $0$                                | (i) $0$                  | (n) $0$                  |
| (e) $7/3$                              | (j) $0$                  |                          |
|  |                          |                          |
| 8. Calcule:                            |                          |                          |
| (a) $-\infty$                          | (e) $+\infty$            | (i) $+\infty$            |
| (b) $-\infty$                          | (f) $-\infty$            | (j) $+\infty$            |
| (c) $-\infty$                          | (g) $-\infty$            | (k) $-\infty$            |
| (d) $+\infty$                          | (h) $-\infty$            | (l) $+\infty$            |

9. (a)  $\lim_{x \rightarrow +\infty} f(x) = 0$ ,  $\lim_{x \rightarrow -\infty} f(x) = 0$ ,  $\lim_{x \rightarrow 1^+} f(x) = +\infty$ ,  $\lim_{x \rightarrow 1^-} f(x) = -\infty$



(b)

10. (a)  $+\infty$  (c) 0 (e)  $+\infty$   
 (b) 0 (d)  $+\infty$  (f)  $5/8$
11. (a)  $+\infty$  (c)  $-\infty$  (e)  $\ln 2$   
 (b)  $+\infty$  (d) 0
- 12.
- 13.
- 14.
15. (a)  $e^3$  (c)  $e$  (e)  $e^2$   
 (b)  $\sqrt{e}$  (d)  $e^2$  (f)  $e^2$
- 16.
17. (a)  $\ln 5$  (b) 2 (c) 0