Gabarito Derivadas 2

Octávio

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1

a)
$$y' = \frac{x}{y}$$

b)
$$y' = -\frac{x}{1+y}$$

c)
$$y' = -\frac{2x}{x^2 + y^2 + 2y}$$

2

$$y = -\frac{x}{2} + 1$$

3

a) f(x) no ponto (1,-2)

$$y_t = -x - 1; y_n = x + 3$$

b) f(x) no ponto (64,4)*

$$y_t = \frac{x}{48} + \frac{8}{3}; y_n = -48x + 3068$$

4

$$y = \frac{x}{2} - \frac{1}{16}$$

5

a)
$$y' = \frac{x}{x^2 + 1} + \arctan(x)$$

b)
$$y' = \frac{6}{\sqrt{1 - 36x^2}}$$

c)
$$y' = 2e^{2x}\left(\frac{1}{\sqrt{1 - 4x^2}} + \arcsin 2x\right)$$

6

a)$-\frac{2}{7}$, b) $\frac{100}{9}$, c) ∞, e) e^2, f) 0, g) ∞, h) 0, i) 1.