

Corrections Savoir Fd. 4

Corrigé Exercice 11

$$f'(x) = -5e^{-5x} \quad g'(x) = \frac{4}{4x+3}$$

$$h'(x) = \frac{-2}{-2x} = \frac{1}{x} \quad i'(x) = -2 \times (-3e^{2-3x}) = 6e^{2-3x}$$

$$\phi'(t) = \frac{1}{2} \times 2te^{t^2} = te^{t^2} \quad A'(x) = \frac{1 - \frac{1}{2} \times 2x}{x - \frac{1}{2}x^2} = \frac{1-x}{\frac{1}{2}x(2-x)} = \frac{2(1-x)}{x(2-x)}$$

$$p'(x) = 12e^{3x} + e^{-x} \quad T'(x) = -\frac{4x}{2x^2} = -\frac{2}{x}$$

Pour préparer le contrôle...

$$f'(x) = \frac{2x+2}{x^2+2x} \quad \psi'(x) = +0,5e^{1-0,5x}$$

$$\alpha'(x) = (2x+1)e^{x^2+x-3} \quad g'(t) = 2 - 2 \times \frac{4}{4t} = 2 - \frac{2}{t}$$

$$\beta'(x) = -4xe^{-x^2} \quad h'(x) = -4 \times \frac{4}{4x+1} - 3 = \frac{-16 - 3(4x+1)}{4x+1} = \frac{-12x - 17}{4x+1}$$

$$j'(x) = \frac{1}{2} \times \frac{2}{2x+3} = \frac{1}{2x+3} \quad b'(x) = 1000 \times (-0,03 e^{-0,03x}) = -30e^{-0,03x}$$

Corrigé Exercice 12

$$1) f'(x) = 5 \times 3 \times (3x-4)^4 = 15(3x-4)^4$$

$$g'(x) = 3 \times (-2) \times (1-2x)^2 = -6(1-2x)^2$$

$$k'(x) = \frac{1}{6} \times 3 \times 2 \times (2x+5)^2 = (2x+5)^2$$

$$a'(x) = 4 \times 2x \times (x^2+1)^3 = 8x(x^2+1)^3$$

$$2) f'(x) = \frac{3}{2\sqrt{3x+1}} \quad i'(x) = 2 + \frac{1}{2\sqrt{1-x}}$$

$$m'(x) = \frac{-5}{(5x-1)^2} \quad p'(x) = -3 \times \frac{-2}{(2x+1)^2} = \frac{6}{(2x+1)^2}$$

Pour préparer le contrôle...

$$1) h'(x) = 4 \times 2 \times 6 \times (6x+5)^1 = 48(6x+5)$$

$$i'(x) = -\frac{3}{2} \times 4 \times \frac{1}{2} \times \left(\frac{x}{2} + \frac{1}{3}\right)^3 = -3\left(\frac{x}{2} + \frac{1}{3}\right)^3$$

$$l'(x) = \frac{1}{4} \times 2 \times (-2) \times (-2x-4)^1 = -(-2x-4) = 2x+4$$

$$c'(x) = -2 \times 4 \times 3x^2(x^3+1)^3 = -24x^2(x^3+1)^3$$

$$2) j'(x) = \frac{4x}{2\sqrt{2x^2+3}} = \frac{2x}{\sqrt{2x^2+3}} \quad h'(x) = 2e^x + \frac{1}{6} \times \frac{-3}{2\sqrt{-3x}} = 2e^x - \frac{1}{4\sqrt{-3x}}$$

$$b'(x) = \frac{-(-2x)}{(2-x^2)^2} = \frac{4x}{(2-x^2)^2} \quad c'(x) = \frac{4}{x} - \frac{4}{(4x)^2} = \frac{4}{x} - \frac{1}{4x^2} = \frac{16x-1}{4x^2}$$