

Dérivées

Chercher les fonctions dérivées des fonctions numériques f définies dans \mathbb{R} par :

$$f(x) = (3x^2 - 7x)(4x^2 - 5)$$

$$f(x) = (7x^2 - 3x)(x^4 - 2x^3)$$

$$f(x) = (x^2 - 3)(2x + 4)$$

$$f(x) = (x^3 - 1)(4x^2 + x - 2)$$

$$f(x) = (8x^2 + 3x - 1)(2x^2 - 4)$$

$$f(x) = (4x^2 - 7)(3 - 5x)$$

$$f(x) = (x^2 + 3)(3 - 4x^2)$$

$$f(x) = \frac{x - 2}{3 - x}$$

$$f(x) = \frac{4 - x^2}{x + 7}$$

$$f(x) = \frac{4 - x^3}{x - 5}$$

$$f(x) = \frac{8x^2 - 7}{3x - 5}$$

$$f(x) = \frac{2x + 3}{4 - x}$$

$$f(x) = \frac{(x^2 - 3x)(4x + 2)}{x - 5}$$

$$f(x) = \frac{(4x - 5)(7x - 2)}{3x^2 - 1}$$

$$f(x) = \frac{(x - 5)(3 - 2x)}{4x + 2}$$

$$f(x) = \frac{(x^2 - 3x)(4x - 5)}{2x^3 - 5x + 2}$$

$$f(x) = \frac{(x - 7)(x^3 - 5)}{4 - x^2}$$

$$f(x) = \frac{(7 - x)(3 - x^2)}{x^3 - 1}$$

$$f(x) = \frac{(x - 4)(3x - 7)}{x^2 - 4x + 2}$$

$$f(x) = f(x) = (x - 7)(3x + 2)(4x^2 - 3)$$

$$f(x) = 5\sqrt{3x^4 + 5x + 2}$$

$$f(x) = 8\sqrt{2x^3 - 5}$$

$$f(x) = 7\sqrt{4x^2 + 3}$$

$$f(x) = (x^2 + 3)^3(2x + 4)$$

$$f(x) = (4x^3 - 5)^2(2x^3 + 1)$$

$$f(x) = (3x^2 + 5)^3(4x + 7)$$

$$f(x) = \frac{(3x^2 + 5)^2}{x^3 + 4}$$

$$f(x) = \frac{7x^2 + 3}{(2x^3 + 4x)^2}$$

$$f(x) = \frac{4x^2 + 5}{(3x + 2)^3}$$

$$f(x) = \frac{(2x + 4)(3x^2 + 5)^2}{3x - 2}$$

$$f(x) = \frac{\sqrt{3x^4 - 5}}{(2x^2 + 3)^2}$$

$$f(x) = \frac{\sqrt{2x - 2}(3x^2 - 4)}{2x - 1}$$

$$f(x) = (5x^2 - 6x + 9)\sqrt[3]{(x + 1)^2}$$

$$f(x) = \sqrt{\frac{1 - x}{1 + x}}$$

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Réponses :

$$f'(x) = ((3x^2 - 7x)(4x^2 - 5))' = 48x^3 - 84x^2 - 30x + 35$$

$$f'(x) = ((7x^2 - 3x)(x^4 - 2x^3))' = 42x^5 - 85x^4 + 24x^3$$

$$f'(x) = ((x^2 - 3)(2x + 4))' = 2(3x^2 + 4x - 3)$$

$$f'(x) = ((x^3 - 1)(4x^2 + x - 2))' = 20x^4 + 4x^3 - 6x^2 - 8x - 1$$

$$f'(x) = ((8x^2 + 3x - 1)(2x^2 - 4))' = 2(32x^3 + 9x^2 - 34x - 6)$$

$$f'(x) = ((4x^2 - 7)(3 - 5x))' = -60x^2 + 24x + 35$$

$$f'(x) = ((x^2 + 3)(3 - 4x^2))' = -2x(8x^2 + 9)$$

$$f'(x) = \left(\frac{x-2}{3-x}\right)' = \frac{1}{(3-x)^2}$$

$$f'(x) = \left(\frac{4-x^2}{x+7}\right)' = \frac{-(x^2+14x+4)}{(x+7)^2}$$

$$f'(x) = \left(\frac{4-x^3}{x-5}\right)' = \frac{-2x^3+15x^2-4}{(x-5)^2}$$

$$f'(x) = \left(\frac{8x^2-7}{3x-5}\right)' = \frac{24x^2-80x+21}{(3x-5)^2}$$

$$f'(x) = \left(\frac{2x+3}{4-x}\right)' = \frac{11}{(4-x)^2}$$

$$f'(x) = \left(\frac{(x^2-3x)(4x+2)}{x-5}\right)' = \frac{8x^3-70x^2+100x+30}{(x-5)^2}$$

$$f'(x) = \left(\frac{(4x-5)(7x-2)}{3x^2-1}\right)' = \frac{129x^2-116x+43}{(3x^2-1)^2}$$

$$f'(x) = \left(\frac{(x-5)(3-2x)}{4x+2}\right)' = \frac{-4x^2-4x+43}{2(2x+1)^2}$$

$$f'(x) = \left(\frac{(x^2-3x)(4x-5)}{2x^3-5x+2}\right)' = \frac{34x^4-100x^3+109x^2-68x+30}{(2x^3-5x+2)^2}$$

$$f'(x) = \left(\frac{(x-7)(x^3-5)}{4-x^2}\right)' = \frac{-2x^5+7x^4+16x^3-89x^2+70x-20}{(4-x^2)^2}$$

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Réponses :

$$f'(x) = \left(\frac{(7-x)(3-x^2)}{x^3-1} \right)' = \frac{7x^4 + 6x^3 - 66x^2 + 14x + 3}{(x^3-1)^2}$$

$$f'(x) = \left(\frac{(x-4)(3x-7)}{x^2-4x+2} \right)' = \frac{7x^2 - 44x + 74}{(x^2-4x+2)^2}$$

$$f'(x) = ((x-7)(3x+2)(4x^2-3))' = 48x^3 - 228x^2 - 130x + 57$$

$$f'(x) = (5\sqrt{3x^4+5x+2})' = \frac{5(12x^3+25)}{2\sqrt{3x^4+5x+2}}$$

$$f'(x) = (8\sqrt{2x^3-5})' = \frac{24x^2}{\sqrt{2x^3-5}}$$

$$f'(x) = (7\sqrt{4x^2+3})' = \frac{28x}{\sqrt{4x^2+3}}$$

$$f'(x) = ((x^2+3)^3(2x+4))' = 2(x^2+3)^2(7x^2+12x+3)$$

$$f'(x) = ((4x^3-5)^2(2x^3+1))' = 6x^2(4x^3-5)(12x^3-1)$$

$$f'(x) = ((3x^2+5)^3(4x+7))' = 2(3x^2+5)^2(42x^2+63x+10)$$

$$f'(x) = \left(\frac{(3x^2+5)^2}{x^3+4} \right)' = \frac{3x(3x^2+5)(x^3-5x+16)}{(x^3+4)^2}$$

$$f'(x) = \left(\frac{7x^2+3}{(2x^3+4x)^2} \right)' = \frac{-14x^4-9x^2-6}{2(x^3+2x)^3}$$

$$f'(x) = \left(\frac{4x^2+5}{(3x+2)^3} \right)' = \frac{-12x^2+16x-45}{(3x+2)^4}$$

$$f'(x) = \left(\frac{(2x+4)(3x^2+5)^2}{3x-2} \right)' = \frac{8(3x^2+5)(9x^3+6x^2-12x-10)}{(3x-2)^2}$$

$$f'(x) = \left(\frac{\sqrt{3x^4-5}}{(2x^2+3)^2} \right)' = \frac{2x(-6x^4+9x^2+20)}{\sqrt{3x^4-5}(2x^2+3)^3}$$

$$f'(x) = \left(\frac{\sqrt{2x-2}(3x^2-4)}{2x-1} \right)' = \frac{18x^3-27x^2+20x-12}{\sqrt{2x-2}(2x-1)^2}$$

$$f'(x) = ((5x^2-6x+9)\sqrt[3]{(x+1)^2})' = \frac{40x^2}{3\sqrt[3]{x+1}}$$

$$f'(x) = \left(\sqrt{\frac{1-x}{1+x}} \right)' = \frac{-1}{(1+x)^2\sqrt{\frac{1-x}{1+x}}}$$

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