

Correction.

1) $f'(x) = 5$

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

3)

$$f'(x) = 8 \times 4x^3 + 2 \times 2x - \frac{3}{4} = 32x^3 + 4x - \frac{3}{4}$$

4)

$$f'(x) = \frac{6}{5} \times 3x^2 - \frac{2}{3} \times 2x + 3 = \frac{18}{5}x^2 - \frac{4}{3}x + 3$$

5)

$$f'(x) = 2 \times 0,1x + 0,24 = 0,2x + 0,24$$

6)

Posons : $u(x) = 8x + 5$ et $v(x) = -2x^2 + 3$.

On a $u'(x) = 8$ et $v'(x) = -2 \times 2x = -4x$

d'où :

$$f'(x) = 8 \times (-2x^2 + 3) + (8x + 5) \times (-4x) \\ = -48x^2 - 20x + 24$$

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

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

9)

On pose $u(x) = 3x - 4$ et $v(x) = 5x + 2$.

On a $u'(x) = 3$ et $v'(x) = 5$.

$$f'(x) = \frac{3(5x+2) - (3x-4) \times 5}{(5x+2)^2} \\ = \frac{15x+6-15x+20}{(5x+2)^2} = \frac{26}{(5x+2)^2}$$

10)

On pose $u(x) = -4x + 3$ et $v(x) = -2x + 5$.

On a $u'(x) = -4$ et $v'(x) = -2$.

$$f'(x) = \frac{-4(-2x+5) - (-4x+3) \times (-2)}{(-2x+5)^2} \\ = \frac{8x-20-8x+6}{(-2x+5)^2} = \frac{-14}{(-2x+5)^2}$$

1) $f'(x) = 8$

2)

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

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

4)

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

5)

$$f'(x) = 0,3 \times 2x + 4,5 = 0,6x + 4,5$$

6).

Posons : $u(x) = -3x^2 + 1$ et $v(x) = 6x + 1$.

On a $u'(x) = -6x$ et $v'(x) = 6$ d'où :

$$f'(x) = -6x \times (6x + 1) + (-3x^2 + 1) \times 6 \\ = -54x^2 - 6x + 6$$

7) $f'(x) = \frac{-6}{(6x-4)^2}$

8)

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

9)

On pose $u(x) = 2x + 7$ et $v(x) = 3x - 1$.

On a $u'(x) = 2$ et $v'(x) = 3$.

$$f'(x) = \frac{2(3x-1) - (2x+7) \times 3}{(3x-1)^2} \\ = \frac{6x-2-6x-21}{(3x-1)^2} = \frac{-23}{(3x-1)^2}$$

10)

On pose $u(x) = -2x + 1$ et $v(x) = -3x + 4$.

On a $u'(x) = -2$ et $v'(x) = -3$.

$$f'(x) = \frac{-2(-3x+4) - (-2x+1) \times (-3)}{(-3x+4)^2} \\ = \frac{6x-8-6x+3}{(-3x+4)^2} = \frac{-5}{(-3x+4)^2}$$