CrInGeCrInGeProduction.Supercringeintroductionhere :

Let's calculate smth with expression given: f(x, y) =

$$x^{3.000} \cdot \ln(x+y)$$

Firstly, let's insert all constants and simplify it:

$$x^{3.000} \cdot \ln(x+y)$$

BRITISH SCIENTISTS WERE SHOCKED, WHEN THEY COUNT IT!!! IN THE POINT (x = 3.000, y = 2.000)IT'S VALUE = 43.455 !!!

1 step: finding a derivation of function:

$$y$$

here it is:

$$1.000$$

2 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

3 step: finding a derivation of function:

$$(x+y)$$

here it is:

$$2.000$$

4 step: finding a derivation of function:

$$\ln(x+y)$$

here it is:

$$2.000 \cdot \frac{1.000}{x+y}$$

5 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

6 step: finding a derivation of function:

$$x^{3.000}$$

here it is:

$$3.000 \cdot x^{2.000}$$

7 step: finding a derivation of function:

$$x^{3.000} \cdot \ln(x+y)$$

here it is:

$$3.000 \cdot x^{2.000} \cdot \ln(x+y) + 2.000 \cdot \frac{1.000}{x+y} \cdot x^{3.000}$$

Congratulations! The first derivation of the expression is:

$$3.000 \cdot x^{2.000} \cdot \ln(x+y) + 2.000 \cdot \frac{1.000}{x+y} \cdot x^{3.000}$$

IN THE POINT (x = 3.000, y = 2.000)IT'S VALUE = 54.255 !!!

Let's calculate the 3 derivation of the expression:

Calculating the 1 derivation of the expression:

1 step: finding a derivation of function:

$$y$$

here it is:

$$1.000$$

2 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

3 step: finding a derivation of function:

$$(x+y)$$

here it is:

$$2.000$$

4 step: finding a derivation of function:

$$\ln(x+y)$$

here it is:

$$2.000 \cdot \frac{1.000}{x+y}$$

5 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

6 step: finding a derivation of function:

$$x^{3.000}$$

here it is:

$$3.000 \cdot x^{2.000}$$

7 step: finding a derivation of function:

$$x^{3.000} \cdot \ln(x+y)$$

here it is:

$$3.000 \cdot x^{2.000} \cdot \ln(x+y) + 2.000 \cdot \frac{1.000}{x+y} \cdot x^{3.000}$$

Calculating the 2 derivation of the expression:

1 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

2 step: finding a derivation of function:

$$x^{3.000}$$

here it is:

$$3.000 \cdot x^{2.000}$$

3 step: finding a derivation of function:

$$y$$

here it is:

$$1.000$$

4 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

5 step: finding a derivation of function:

$$x+y$$

here it is:

$$2.000$$

6 step: finding a derivation of function:

$$1.000$$

here it is:

$$0.000$$

7 step: finding a derivation of function:

$$\frac{1.000}{x+y}$$

here it is:

$$\frac{(-1.000) \cdot 2.000}{(x+y)^{2.000}}$$

8 step: finding a derivation of function:

$$2.000$$

here it is:

$$0.000$$

9 step: finding a derivation of function:

$$2.000 \cdot \frac{1.000}{x+y}$$

here it is:

$$2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}}$$

10 step: finding a derivation of function:

$$2.000 \cdot \frac{1.000}{x+y} \cdot x^{3.000}$$

here it is:

$$2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}} \cdot x^{3.000} + 3.000 \cdot x^{2.000} \cdot 2.000 \cdot \frac{1.000}{x+y}$$

11 step: finding a derivation of function:

$$y$$

here it is:

$$1.000$$

12 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

13 step: finding a derivation of function:

$$(x+y)$$

here it is:

$$2.000$$

14 step: finding a derivation of function:

$$\ln(x+y)$$

here it is:

$$2.000 \cdot \frac{1.000}{x+y}$$

15 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

16 step: finding a derivation of function:

$$x^{2.000}$$

here it is:

$$2.000 \cdot x$$

17 step: finding a derivation of function:

$$3.000$$

here it is:

$$0.000$$

18 step: finding a derivation of function:

$$3.000 \cdot x^{2.000}$$

here it is:

$$3.000 \cdot 2.000 \cdot x$$

19 step: finding a derivation of function:

$$3.000 \cdot x^{2.000} \cdot \ln(x+y)$$

here it is:

$$3.000 \cdot 2.000 \cdot x \cdot \ln(x+y) + 2.000 \cdot \frac{1.000}{x+y} \cdot 3.000 \cdot x^{2.000}$$

20 step: finding a derivation of function:

$$3.000 \cdot x^{2.000} \cdot \ln(x+y) + 2.000 \cdot \frac{1.000}{x+y} \cdot x^{3.000}$$

here it is:

$$3.000 \cdot 2.000 \cdot x \cdot \ln(x+y) + 2.000 \cdot \frac{1.000}{x+y} \cdot 3.000 \cdot x^{2.000} + 2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}} \cdot x^{3.000} + 3.000 \cdot x^{2.000} \cdot 2.000 \cdot \frac{1.000}{x+y}$$

Calculating the 3 derivation of the expression:

1 step: finding a derivation of function:

$$y$$

here it is:

$$1.000$$

2 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

3 step: finding a derivation of function:

$$x+y$$

here it is:

$$2.000$$

4 step: finding a derivation of function:

$$1.000$$

here it is:

$$0.000$$

5 step: finding a derivation of function:

$$\frac{1.000}{x+y}$$

here it is:

$$\frac{(-1.000) \cdot 2.000}{(x+y)^{2.000}}$$

6 step: finding a derivation of function:

$$2.000$$

here it is:

$$0.000$$

7 step: finding a derivation of function:

$$2.000 \cdot \frac{1.000}{x+y}$$

here it is:

$$2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}}$$

8 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

9 step: finding a derivation of function:

$$x^{2.000}$$

here it is:

$$2.000 \cdot x$$

10 step: finding a derivation of function:

$$3.000$$

here it is:

$$0.000$$

11 step: finding a derivation of function:

$$3.000 \cdot x^{2.000}$$

here it is:

$$3.000 \cdot 2.000 \cdot x$$

12 step: finding a derivation of function:

$$3.000 \cdot x^{2.000} \cdot 2.000 \cdot \frac{1.000}{x+y}$$

here it is:

$$3.000 \cdot 2.000 \cdot x \cdot 2.000 \cdot \frac{1.000}{x+y} + 2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}} \cdot 3.000 \cdot x^{2.000}$$

13 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

14 step: finding a derivation of function:

$$x^{3.000}$$

here it is:

$$3.000 \cdot x^{2.000}$$

15 step: finding a derivation of function:

$$y$$

here it is:

$$1.000$$

16 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

17 step: finding a derivation of function:

$$(x+y)$$

here it is:

$$2.000$$

18 step: finding a derivation of function:

$$(x+y)^{2.000}$$

here it is:

$$2.000 \cdot 2.000 \cdot (x+y)$$

19 step: finding a derivation of function:

$$(-2.000)$$

here it is:

$$0.000$$

20 step: finding a derivation of function:

$$\frac{(-2.000)}{(x+y)^{2.000}}$$

here it is:

$$\frac{(-1.000) \cdot (-2.000) \cdot 2.000 \cdot 2.000 \cdot (x+y)}{((x+y)^{2.000})^{2.000}}$$

21 step: finding a derivation of function:

$$2.000$$

here it is:

$$0.000$$

22 step: finding a derivation of function:

$$2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}}$$

here it is:

$$2.000 \cdot \frac{(-1.000) \cdot (-2.000) \cdot 2.000 \cdot 2.000 \cdot (x+y)}{((x+y)^{2.000})^{2.000}}$$

23 step: finding a derivation of function:

$$2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}} \cdot x^{3.000}$$

here it is:

$$2.000 \cdot \frac{(-1.000) \cdot (-2.000) \cdot 2.000 \cdot 2.000 \cdot (x+y)}{((x+y)^{2.000})^{2.000}} \cdot x^{3.000} + 3.000 \cdot x^{2.000} \cdot 2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}}$$

24 step: finding a derivation of function:

$$2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}} \cdot x^{3.000} + 3.000 \cdot x^{2.000} \cdot 2.000 \cdot \frac{1.000}{x+y}$$

here it is:

$$2.000 \cdot \frac{(-1.000) \cdot (-2.000) \cdot 2.000 \cdot 2.000 \cdot (x+y)}{((x+y)^{2.000})^{2.000}} \cdot x^{3.000} + 3.000 \cdot x^{2.000} \cdot 2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}} + 3.000 \cdot 2.000 \cdot x \cdot 2.000 \cdot \frac{1.}{x}$$

25 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

26 step: finding a derivation of function:

$$x^{2.000}$$

here it is:

$$2.000 \cdot x$$

27 step: finding a derivation of function:

$$3.000$$

here it is:

$$0.000$$

28 step: finding a derivation of function:

$$3.000 \cdot x^{2.000}$$

here it is:

$$3.000 \cdot 2.000 \cdot x$$

29 step: finding a derivation of function:

$$y$$

here it is:

$$1.000$$

30 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

31 step: finding a derivation of function:

$$x+y$$

here it is:

$$2.000$$

32 step: finding a derivation of function:

$$1.000$$

here it is:

$$0.000$$

33 step: finding a derivation of function:

$$\frac{1.000}{x+y}$$

here it is:

$$\frac{(-1.000) \cdot 2.000}{(x+y)^{2.000}}$$

34 step: finding a derivation of function:

$$2.000$$

here it is:

$$0.000$$

35 step: finding a derivation of function:

$$2.000 \cdot \frac{1.000}{x+y}$$

here it is:

$$2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}}$$

36 step: finding a derivation of function:

$$2.000 \cdot \frac{1.000}{x+y} \cdot 3.000 \cdot x^{2.000}$$

here it is:

$$2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}} \cdot 3.000 \cdot x^{2.000} + 3.000 \cdot 2.000 \cdot x \cdot 2.000 \cdot \frac{1.000}{x+y}$$

37 step: finding a derivation of function:

$$y$$

here it is:

$$1.000$$

38 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

39 step: finding a derivation of function:

$$(x+y)$$

here it is:

$$2.000$$

40 step: finding a derivation of function:

$$\ln(x+y)$$

here it is:

$$2.000 \cdot \frac{1.000}{x+y}$$

41 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

42 step: finding a derivation of function:

$$2.000$$

here it is:

$$0.000$$

43 step: finding a derivation of function:

$$2.000 \cdot x$$

here it is:

$$2.000$$

44 step: finding a derivation of function:

$$3.000$$

here it is:

$$0.000$$

45 step: finding a derivation of function:

$$3.000 \cdot 2.000 \cdot x$$

here it is:

$$6.000$$

46 step: finding a derivation of function:

$$3.000 \cdot 2.000 \cdot x \cdot \ln(x+y)$$

here it is:

$$6.000 \cdot \ln(x+y) + 2.000 \cdot \frac{1.000}{x+y} \cdot 3.000 \cdot 2.000 \cdot x$$

47 step: finding a derivation of function:

$$3.000 \cdot 2.000 \cdot x \cdot \ln(x+y) + 2.000 \cdot \frac{1.000}{x+y} \cdot 3.000 \cdot x^{2.000}$$

here it is:

$$6.000 \cdot \ln(x+y) + 2.000 \cdot \frac{1.000}{x+y} \cdot 3.000 \cdot 2.000 \cdot x + 2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}} \cdot 3.000 \cdot x^{2.000} + 3.000 \cdot 2.000 \cdot x \cdot 2.000 \cdot \frac{1.000}{x+y}$$

48 step: finding a derivation of function:

$$3.000 \cdot 2.000 \cdot x \cdot \ln(x+y) + 2.000 \cdot \frac{1.000}{x+y} \cdot 3.000 \cdot x^{2.000} + 2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}} \cdot x^{3.000} + 3.000 \cdot x^{2.000} \cdot 2.000 \cdot \frac{1.000}{x+y}$$

here it is:

$$6.000 \cdot \ln(x+y) + 2.000 \cdot \frac{1.000}{x+y} \cdot 3.000 \cdot 2.000 \cdot x + 2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}} \cdot 3.000 \cdot x^{2.000} + 3.000 \cdot 2.000 \cdot x \cdot 2.000 \cdot \frac{1.000}{x+y} + 2$$

Finally... The 3 derivation of the expression:

$$6.000 \cdot \ln(x+y) + 2.000 \cdot \frac{1.000}{x+y} \cdot 3.000 \cdot 2.000 \cdot x + 2.000 \cdot \frac{(-2.000)}{(x+y)^{2.000}} \cdot 3.000 \cdot x^{2.000} + 3.000 \cdot 2.000 \cdot x \cdot 2.000 \cdot \frac{1.000}{x+y} + 2$$

BRITISH SCIENTISTS WERE SHOCKED, WHEN THEY COUNT THE 3 DERIVATION OF THIS EXPRESSION!!! IN THE POINT (x = 3.000, y = 2.000)IT'S VALUE = 21.753 !!!

Partial derivation of the expression on the variable 'x':

$$3.000 \cdot x^{2.000} \cdot \ln(x+2.000) + \frac{1.000}{x+2.000} \cdot x^{3.000}$$

IN THE POINT (x = 3.000, y = 2.000) IT'S VALUE = 48.854824 !!!

Partial derivation of the expression on the variable 'y':

$$27.000 \cdot \frac{1.000}{3.000+y}$$

IN THE POINT (x = 3.000, y = 2.000) IT'S VALUE = 5.400000 !!!

Full derivation:

$$\sqrt{(3.000 \cdot x^{2.000} \cdot \ln(x+2.000) + \frac{1.000}{x+2.000} \cdot x^{3.000})^{2.000} + (27.000 \cdot \frac{1.000}{3.000+y})^{2.000}}$$

IN THE POINT (x = 3.000, y = 2.000)IT'S VALUE = 49.152 !!!

Let's consider the expression as a function of x variable: f(x) =

$$x^{3.000} \cdot \ln(x+2.000)$$

Maklorens formula for x near to 3.000000:

$$43.455 + 48.855 \cdot (x-3.000) + 19.345 \cdot (x-3.000)^{2.000} + 2.941 \cdot (x-3.000)^{3.000} + 0.081 \cdot (x-3.000)^{4.000}$$

And remainig member is o maloe from:

$$(x-3.000)^{4.000}$$

Graph f(x):

Tangent equation in point -2.000: f(x) =

$$(-inf) \cdot (x-(-2.000)) + inf$$

Normal equation in point -2.000: f(x) =

$$0.000 \cdot (x-(-2.000)) + inf$$