

CrInGeCrInGe Production. Super cringe introduction here:  
 Let's calculate smth with expression given:  $f(x, y) =$

$$\frac{\sin \frac{x}{2.000}}{y + e}$$

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

$$\frac{\sin \frac{x}{2.000}}{y + 2.718}$$

BRITISH SCIENTISTS WERE SHOCKED, WHEN THEY COUNT IT!!! IN  
 THE POINT ( $x = 1.500$ ,  $y = 2.000$ )IT'S VALUE = 0.144 !!!

1 step: finding a derivation of function:

$$2.718$$

here it is:

$$0.000$$

2 step: finding a derivation of function:

$$y$$

here it is:

$$1.000$$

3 step: finding a derivation of function:

$$y + 2.718$$

here it is:

$$1.000$$

4 step: finding a derivation of function:

$$2.000$$

here it is:

$$0.000$$

5 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

6 step: finding a derivation of function:

$$\frac{x}{2.000}$$

$$1$$

here it is:

$$\frac{2.000}{4.000}$$

7 step: finding a derivation of function:

$$\sin \frac{x}{2.000}$$

here it is:

$$0.500 \cdot \cos \frac{x}{2.000}$$

8 step: finding a derivation of function:

$$\frac{\sin \frac{x}{2.000}}{y + 2.718}$$

here it is:

$$\frac{0.500 \cdot \cos \frac{x}{2.000} \cdot (y + 2.718) - \sin \frac{x}{2.000}}{(y + 2.718)^{2.000}}$$

Congratulations! The first derivation of the expression is:

$$\frac{0.500 \cdot \cos \frac{x}{2.000} \cdot (y + 2.718) - \sin \frac{x}{2.000}}{(y + 2.718)^{2.000}}$$

IN THE POINT (x = 1.500, y = 2.000)IT'S VALUE = 0.047 !!!

Let's calculate the 2 derivation of the expression:

Calculating the 1 derivation of the expression:

1 step: finding a derivation of function:

$$2.718$$

here it is:

$$0.000$$

2 step: finding a derivation of function:

$$y$$

here it is:

$$1.000$$

3 step: finding a derivation of function:

$$y + 2.718$$

here it is:

$$1.000$$

4 step: finding a derivation of function:

$$2.000$$

here it is:

$$0.000$$

5 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

6 step: finding a derivation of function:

$$\frac{x}{2.000}$$

here it is:

$$\frac{2.000}{4.000}$$

7 step: finding a derivation of function:

$$\sin \frac{x}{2.000}$$

here it is:

$$0.500 \cdot \cos \frac{x}{2.000}$$

8 step: finding a derivation of function:

$$\frac{\sin \frac{x}{2.000}}{y + 2.718}$$

here it is:

$$\frac{0.500 \cdot \cos \frac{x}{2.000} \cdot (y + 2.718) - \sin \frac{x}{2.000}}{(y + 2.718)^{2.000}}$$

Calculating the 2 derivation of the expression:

1 step: finding a derivation of function:

$$2.718$$

here it is:

$$0.000$$

2 step: finding a derivation of function:

$$y$$

here it is:

$$1.000$$

3 step: finding a derivation of function:

$$(y + 2.718)$$

here it is:

$$1.000$$

4 step: finding a derivation of function:

$$(y + 2.718)^{2.000}$$

here it is:

$$2.000 \cdot (y + 2.718)$$

5 step: finding a derivation of function:

$$2.000$$

here it is:

$$0.000$$

6 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

7 step: finding a derivation of function:

$$\frac{x}{2.000}$$

here it is:

$$\frac{2.000}{4.000}$$

8 step: finding a derivation of function:

$$\sin \frac{x}{2.000}$$

here it is:

$$0.500 \cdot \cos \frac{x}{2.000}$$

9 step: finding a derivation of function:

$$2.718$$

here it is:

$$0.000$$

10 step: finding a derivation of function:

$$y$$

here it is:

$$1.000$$

$$4$$

11 step: finding a derivation of function:

$$(y + 2.718)$$

here it is:

$$1.000$$

12 step: finding a derivation of function:

$$2.000$$

here it is:

$$0.000$$

13 step: finding a derivation of function:

$$x$$

here it is:

$$1.000$$

14 step: finding a derivation of function:

$$\frac{x}{2.000}$$

here it is:

$$\frac{2.000}{4.000}$$

15 step: finding a derivation of function:

$$\cos \frac{x}{2.000}$$

here it is:

$$0.500 \cdot (-1.000) \cdot \sin \frac{x}{2.000}$$

16 step: finding a derivation of function:

$$0.500$$

here it is:

$$0.000$$

17 step: finding a derivation of function:

$$0.500 \cdot \cos \frac{x}{2.000}$$

here it is:

$$0.500 \cdot 0.500 \cdot (-1.000) \cdot \sin \frac{x}{2.000}$$

18 step: finding a derivation of function:

$$0.500 \cdot \cos \frac{x}{2.000} \cdot (y + 2.718)$$

here it is:

$$0.500 \cdot 0.500 \cdot (-1.000) \cdot \sin \frac{x}{2.000} \cdot (y + 2.718) + 0.500 \cdot \cos \frac{x}{2.000}$$

19 step: finding a derivation of function:

$$0.500 \cdot \cos \frac{x}{2.000} \cdot (y + 2.718) - \sin \frac{x}{2.000}$$

here it is:

$$(0.500 \cdot 0.500 \cdot (-1.000) \cdot \sin \frac{x}{2.000} \cdot (y + 2.718) + 0.500 \cdot \cos \frac{x}{2.000}) - 0.500 \cdot \cos \frac{x}{2.000}$$

20 step: finding a derivation of function:

$$\frac{0.500 \cdot \cos \frac{x}{2.000} \cdot (y + 2.718) - \sin \frac{x}{2.000}}{(y + 2.718)^{2.000}}$$

here it is:

$$\frac{((0.500 \cdot 0.500 \cdot (-1.000) \cdot \sin \frac{x}{2.000} \cdot (y + 2.718) + 0.500 \cdot \cos \frac{x}{2.000}) - 0.500 \cdot \cos \frac{x}{2.000}) \cdot (y + 2.718)^{2.000} - 2.000 \cdot ((y + 2.718)^{2.000})^{2.000}}{(y + 2.718)^{2.000} \cdot 2.000}$$

Finally... The 2 derivation of the expression:

$$\frac{((0.500 \cdot 0.500 \cdot (-1.000) \cdot \sin \frac{x}{2.000} \cdot (y + 2.718) + 0.500 \cdot \cos \frac{x}{2.000}) - 0.500 \cdot \cos \frac{x}{2.000}) \cdot (y + 2.718)^{2.000} - 2.000 \cdot ((y + 2.718)^{2.000})^{2.000}}{(y + 2.718)^{2.000} \cdot 2.000}$$

BRITISH SCIENTISTS WERE SHOCKED, WHEN THEY COUNT THE 2 DERIVATION OF THIS EXPRESSION!!! IN THE POINT (x = 1.500, y = 2.000)IT'S VALUE = -0.056 !!!

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

$$\frac{4.718 \cdot 0.500 \cdot \cos \frac{x}{2.000}}{22.262}$$

IN THE POINT (x = 1.500, y = 2.000) IT'S VALUE = 0.077538 !!!

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

$$\frac{(-0.682)}{(y + 2.718)^{2.000}}$$

IN THE POINT (x = 1.500, y = 2.000) IT'S VALUE = -0.030619 !!!

Full derivation:

$$\sqrt{\left(\frac{4.718 \cdot 0.500 \cdot \cos \frac{x}{2.000}}{22.262}\right)^{2.000} + \left(\frac{(-0.682)}{(y + 2.718)^{2.000}}\right)^{2.000}}$$

IN THE POINT (x = 1.500, y = 2.000) IT'S VALUE = 0.083 !!!

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

$$\frac{\sin \frac{x}{2.000}}{4.718}$$

Maklorens formula for x near to 1.500000:

$$0.144 + 0.078 \cdot (x - 1.500) + (-0.018) \cdot (x - 1.500)^{2.000} + (-0.003) \cdot (x - 1.500)^{3.000}$$

And remainig member is o maloe from:

$$(x - 1.500)^{3.000}$$

Graph  $f(x)$ :

Tangent equation in point 4.000:  $f(x) =$

$$(-0.044) \cdot (x - 4.000) + 0.193$$

Normal equation in point 4.000:  $f(x) =$

$$22.676 \cdot (x - 4.000) + 0.193$$