

1 Introduction

CrInGeCrInGeProduction.Supercringeintroductionhere :

2 Some basic knowledge about researching problem...

Parameters and constants we use in this work:

**Constants** (3):  
e = 2.718282  
pi = 3.141593  
AbObA = 1337.228690  
**Variables** (3):  
a = 3.141500  
kek = 13.000000  
x = 1.000000  
**Parameters of exploration** :  
*Number of differentiates* : 2  
*Macloren's accuracy* : 3  
*Target point* : 0.200000  
*Delta coverage of tangent point*: 2.500000  
*Graph diapasone* : [-1 : 15]  
So let's calculate smth with a given function:  $f(a, kek, x) = \cos(a + \frac{kek}{1.000^{AbObA}}) + \ln(1.000 + x \cdot kek \cdot (0.000 - 1.000^{(\ln e)}))$   
Firstly, let's insert all constants:  $f(a, kek, x) = \cos(a + \frac{kek}{1.000^{1337.229}}) + \ln(1.000 + x \cdot kek \cdot (0.000 - 1.000^{(\ln 2.718)}))$   
And simplify this expression (if possible):  $f(a, kek, x) = \cos(a + kek) + \ln(1.000 + (-1.000) \cdot x \cdot kek)$

3 Exploration the expression as a function of multiple variables

Calculation value of function in the point BRITISH SCIENTISTS WERE SHOCKED, WHEN THEY COUNT IT!!!

In the point  $M_0(a_0, kek_0, x_0) = (3.142, 13.000, 1.000)$  **it's value** = -nan  
Personally, I've always thought about first derivation of something like that function... Haven't you?  
But now, by using informatics and math skills I feel that I'm prepared enough to calculate it!  
**1 step:** Finding a derivation of *kek*  
When I was child, my father always told me: "Remember, son:  
 $(kek)' =$   
= 1.000  
**2 step:** Finding a derivation of *x*  
What if:  
 $(x)' =$   
= 1.000  
**3 step:** Finding a derivation of  $x \cdot kek$   
It's really easy to find:  
 $(x \cdot kek)' =$   
=  $kek + x$   
**4 step:** Finding a derivation of  $-1.000$   
Sounds logical that it is the same as:  
 $(-1.000)' = \dots = \text{[top secret]} = \dots =$   
= 0.000  
**5 step:** Finding a derivation of  $(-1.000) \cdot x \cdot kek$   
What if:  
 $((-1.000) \cdot x \cdot kek)' =$   
=  $(-1.000) \cdot (kek + x)$   
**6 step:** Finding a derivation of 1.000  
Sounds logical that it is the same as:  
 $(1.000)' =$   
= 0.000  
**7 step:** Finding a derivation of  $1.000 + (-1.000) \cdot x \cdot kek$   
Even my two-aged sister knows that:  
 $(1.000 + (-1.000) \cdot x \cdot kek)' =$   
=  $(-1.000) \cdot (kek + x)$   
**8 step:** Finding a derivation of  $\ln(1.000 + (-1.000) \cdot x \cdot kek)$   
If someone asked me that in the middle of the night, I wouldn't hesitate to say:  
 $(\ln(1.000 + (-1.000) \cdot x \cdot kek))' =$   
=  $\frac{1.000}{1.000 + (-1.000) \cdot x \cdot kek} \cdot (-1.000) \cdot (kek + x)$   
**9 step:** Finding a derivation of *kek*  
My roommate mumbled it in his sleep all night:  
 $(kek)' = \dots = \text{[top secret]} = \dots =$   
= 1.000  
**10 step:** Finding a derivation of *a*  
Man... Just look:  
 $(a)' =$   
= 1.000  
**11 step:** Finding a derivation of  $a + kek$   
I was asked not to tell anyone that:  
 $(a + kek)' =$   
= 2.000  
**12 step:** Finding a derivation of  $\cos(a + kek)$   
When I was child, my father always told me: "Remember, son:  
 $(\cos(a + kek))' = \dots = \text{[top secret]} = \dots =$   
=  $2.000 \cdot (-1.000) \cdot \sin(a + kek)$   
**13 step:** Finding a derivation of  $\cos(a + kek) + \ln(1.000 + (-1.000) \cdot x \cdot kek)$   
thanks to the results of my colleagues' scientific work, I know that:  
 $(\cos(a + kek) + \ln(1.000 + (-1.000) \cdot x \cdot kek))' =$   
=  $2.000 \cdot (-1.000) \cdot \sin(a + kek) + \frac{1.000}{1.000 + (-1.000) \cdot x \cdot kek} \cdot (-1.000) \cdot (kek + x)$   
Congratulations! **The first derivation of the expression** is:  
 $f'(a, kek, x) = 2.000 \cdot (-1.000) \cdot \sin(a + kek) + \frac{1.000}{1.000 + (-1.000) \cdot x \cdot kek} \cdot (-1.000) \cdot (kek + x)$   
In the point  $M_0(a_0, kek_0, x_0) = (3.142, 13.000, 1.000)$  it's value = 2.00683

**Finding the 2 derivation** Let's find the **1 derivation** of the expression:

1 step: Finding a derivation of  $kek$   
A true prince must know that:  
 $(kek)' =$   
= 1.000  
2 step: Finding a derivation of  $x$   
If someone asked me that in the middle of the night, I wouldn't hesitate to say:  
 $(x)' =$   
= 1.000  
3 step: Finding a derivation of  $x \cdot kek$   
What if:  
 $(x \cdot kek)' = \dots = \text{[top secret]} = \dots =$   
=  $kek + x$   
4 step: Finding a derivation of  $-1.000$   
thanks to the results of my colleagues' scientific work, I know that:  
 $(-1.000)' = \dots = \text{[top secret]} = \dots =$   
= 0.000  
5 step: Finding a derivation of  $(-1.000) \cdot x \cdot kek$   
While preparing for exams, I learned a lot of new things, for example:  
 $((-1.000) \cdot x \cdot kek)' = \dots = \text{[top secret]} = \dots =$   
=  $(-1.000) \cdot (kek + x)$   
6 step: Finding a derivation of 1.000  
It's really easy to find:  
 $(1.000)' =$   
= 0.000  
7 step: Finding a derivation of  $1.000 + (-1.000) \cdot x \cdot kek$   
If someone asked me that in the middle of the night, I wouldn't hesitate to say:  
 $(1.000 + (-1.000) \cdot x \cdot kek)' =$   
=  $(-1.000) \cdot (kek + x)$   
8 step: Finding a derivation of  $\ln(1.000 + (-1.000) \cdot x \cdot kek)$   
I spend the hole of my life to find the answer and finally it's:  
 $(\ln(1.000 + (-1.000) \cdot x \cdot kek))' = \dots = \text{[top secret]} = \dots =$   
=  $\frac{1.000}{1.000 + (-1.000) \cdot x \cdot kek} \cdot (-1.000) \cdot (kek + x)$   
9 step: Finding a derivation of  $kek$   
I spend the hole of my life to find the answer and finally it's:  
 $(kek)' =$   
= 1.000  
10 step: Finding a derivation of  $a$   
For centuries, people have hunted for the secret knowledge that:  
 $(a)' =$   
= 1.000  
11 step: Finding a derivation of  $a + kek$   
A true prince must know that:  
 $(a + kek)' =$   
= 2.000  
12 step: Finding a derivation of  $\cos(a + kek)$   
I was asked not to tell anyone that:  
 $(\cos(a + kek))' = \dots = \text{[top secret]} = \dots =$   
=  $2.000 \cdot (-1.000) \cdot \sin(a + kek)$   
13 step: Finding a derivation of  $\cos(a + kek) + \ln(1.000 + (-1.000) \cdot x \cdot kek)$   
While preparing for exams, I learned a lot of new things, for example:  
 $(\cos(a + kek) + \ln(1.000 + (-1.000) \cdot x \cdot kek))' =$   
=  $2.000 \cdot (-1.000) \cdot \sin(a + kek) + \frac{1.000}{1.000 + (-1.000) \cdot x \cdot kek} \cdot (-1.000) \cdot (kek + x)$   
Let's find the **2 derivation** of the expression:  
1 step: Finding a derivation of  $x$   
I was asked not to tell anyone that:  
 $(x)' =$   
= 1.000  
2 step: Finding a derivation of  $kek$   
Man... Just look:  
 $(kek)' = \dots = \text{[top secret]} = \dots =$   
= 1.000  
3 step: Finding a derivation of  $kek + x$   
A true prince must know that:  
 $(kek + x)' =$   
= 2.000  
4 step: Finding a derivation of  $-1.000$   
Man... Just look:  
 $(-1.000)' =$   
= 0.000  
5 step: Finding a derivation of  $(-1.000) \cdot (kek + x)$   
It's really easy to find:  
 $((-1.000) \cdot (kek + x))' = \dots = \text{[top secret]} = \dots =$   
=  $-2.000$   
6 step: Finding a derivation of  $kek$   
My roommate mumbled it in his sleep all night:  
 $(kek)' = \dots = \text{[top secret]} = \dots =$   
= 1.000  
7 step: Finding a derivation of  $x$   
It's simple as fuck:  
 $(x)' =$   
= 1.000  
8 step: Finding a derivation of  $x \cdot kek$   
A true prince must know that:  
 $(x \cdot kek)' = \dots = \text{[top secret]} = \dots =$   
=  $kek + x$   
9 step: Finding a derivation of  $-1.000$   
It's really easy to find:  
 $(-1.000)' =$   
= 0.000

10 step: Finding a derivation of  $(-1.000) \cdot x \cdot kek$   
My roommate mumbled it in his sleep all night:  
 $((-1.000) \cdot x \cdot kek)' = \dots = \text{[top secret]} = \dots =$   
 $= (-1.000) \cdot (kek + x)$   
11 step: Finding a derivation of 1.000  
A true prince must know that:  
 $(1.000)' = \dots = \text{[top secret]} = \dots =$   
 $= 0.000$   
12 step: Finding a derivation of  $1.000 + (-1.000) \cdot x \cdot kek$   
A true prince must know that:  
 $(1.000 + (-1.000) \cdot x \cdot kek)' = \dots = \text{[top secret]} = \dots =$   
 $= (-1.000) \cdot (kek + x)$   
13 step: Finding a derivation of 1.000  
Sounds logical that it is the same as:  
 $(1.000)' =$   
 $= 0.000$   
14 step: Finding a derivation of  $\frac{1.000}{1.000 + (-1.000) \cdot x \cdot kek}$   
I was asked not to tell anyone that:  
 $(\frac{1.000}{1.000 + (-1.000) \cdot x \cdot kek})' =$   
 $= \frac{(-1.000) \cdot (-1.000) \cdot (kek + x)}{(1.000 + (-1.000) \cdot x \cdot kek)^{2.000}}$   
15 step: Finding a derivation of  $\frac{1.000}{1.000 + (-1.000) \cdot x \cdot kek} \cdot (-1.000) \cdot (kek + x)$   
My friends always beat me, because I didn't know that:  
 $(\frac{1.000}{1.000 + (-1.000) \cdot x \cdot kek} \cdot (-1.000) \cdot (kek + x))' = \dots = \text{[top secret]} = \dots =$   
 $= \frac{(-1.000) \cdot (-1.000) \cdot (kek + x)}{(1.000 + (-1.000) \cdot x \cdot kek)^{2.000}} \cdot (-1.000) \cdot (kek + x) + (-2.000) \cdot \frac{1.000}{1.000 + (-1.000) \cdot x \cdot kek}$   
16 step: Finding a derivation of  $kek$   
My roommate mumbled it in his sleep all night:  
 $(kek)' =$   
 $= 1.000$   
17 step: Finding a derivation of  $a$   
My roommate mumbled it in his sleep all night:  
 $(a)' = \dots = \text{[top secret]} = \dots =$   
 $= 1.000$   
18 step: Finding a derivation of  $a + kek$   
I was asked not to tell anyone that:  
 $(a + kek)' =$   
 $= 2.000$   
19 step: Finding a derivation of  $\sin(a + kek)$   
Even my two-aged sister knows that:  
 $(\sin(a + kek))' =$   
 $= 2.000 \cdot \cos(a + kek)$   
20 step: Finding a derivation of  $-1.000$   
My roommate mumbled it in his sleep all night:  
 $(-1.000)' = \dots = \text{[top secret]} = \dots =$   
 $= 0.000$   
21 step: Finding a derivation of  $(-1.000) \cdot \sin(a + kek)$   
My roommate mumbled it in his sleep all night:  
 $((-1.000) \cdot \sin(a + kek))' = \dots = \text{[top secret]} = \dots =$   
 $= (-1.000) \cdot 2.000 \cdot \cos(a + kek)$   
22 step: Finding a derivation of 2.000  
I was asked not to tell anyone that:  
 $(2.000)' =$   
 $= 0.000$   
23 step: Finding a derivation of  $2.000 \cdot (-1.000) \cdot \sin(a + kek)$   
Even my two-aged sister knows that:  
 $(2.000 \cdot (-1.000) \cdot \sin(a + kek))' = \dots = \text{[top secret]} = \dots =$   
 $= 2.000 \cdot (-1.000) \cdot 2.000 \cdot \cos(a + kek)$   
24 step: Finding a derivation of  $2.000 \cdot (-1.000) \cdot \sin(a + kek) + \frac{1.000}{1.000 + (-1.000) \cdot x \cdot kek} \cdot (-1.000) \cdot (kek + x)$   
A true prince must know that:  
 $(2.000 \cdot (-1.000) \cdot \sin(a + kek) + \frac{1.000}{1.000 + (-1.000) \cdot x \cdot kek} \cdot (-1.000) \cdot (kek + x))' =$   
 $= 2.000 \cdot (-1.000) \cdot 2.000 \cdot \cos(a + kek) + \frac{(-1.000) \cdot (-1.000) \cdot (kek + x)}{(1.000 + (-1.000) \cdot x \cdot kek)^{2.000}} \cdot (-1.000) \cdot (kek + x) + (-2.000) \cdot \frac{1.000}{1.000 + (-1.000) \cdot x \cdot kek}$   
**Finally... The 2 derivation of the expression:**  
 $f^{(2)}(a, kek, x) = 2.000 \cdot (-1.000) \cdot 2.000 \cdot \cos(a + kek) + \frac{(-1.000) \cdot (-1.000) \cdot (kek + x)}{(1.000 + (-1.000) \cdot x \cdot kek)^{2.000}} \cdot (-1.000) \cdot (kek + x) + (-2.000) \cdot \frac{1.000}{1.000 + (-1.000) \cdot x \cdot kek}$   
BRITISH SCIENTISTS WERE SHOCKED AGAIN, WHEN THEY COUNT THE 2 DERIVATION OF THIS EXPRESSION!!!  
In the point  $M_0(a_0, kek_0, x_0) = (3.142, 13.000, 1.000)$  it's value = 2.43550

**Finding partial derivations** Partial derivation of the expression on the variable a:

$\frac{\partial f}{\partial a} = (-1.000) \cdot \sin(a + 13.000)$   
In the point  $M_0(a_0, kek_0, x_0) = (3.142, 13.000, 1.000)$  it's value = 0.42008 !!!  
Partial derivation of the expression on the variable kek:  
 $\frac{\partial f}{\partial kek} = (-1.000) \cdot \sin(3.142 + kek) + (-1.000) \cdot \frac{1.000}{1.000 + (-1.000) \cdot kek}$   
In the point  $M_0(a_0, kek_0, x_0) = (3.142, 13.000, 1.000)$  it's value = 0.50342 !!!  
Partial derivation of the expression on the variable x:  
 $\frac{\partial f}{\partial x} = (-13.000) \cdot \frac{1.000}{1.000 + (-1.000) \cdot 13.000 \cdot x}$   
In the point  $M_0(a_0, kek_0, x_0) = (3.142, 13.000, 1.000)$  it's value = 1.08333 !!!

**Finding full derivation** Full derivation:

$\sqrt{((-1.000) \cdot \sin(a + 13.000))^{2.000} + ((-1.000) \cdot \sin(3.142 + kek) + (-1.000) \cdot \frac{1.000}{1.000 + (-1.000) \cdot kek})^{2.000} + ((-13.000) \cdot \frac{1.000}{1.000 + (-1.000) \cdot 13.000 \cdot x})^{2.000}}$   
In the point  $M_0(a_0, kek_0, x_0) = (3.142, 13.000, 1.000)$  it's value = 1.26630 !!!

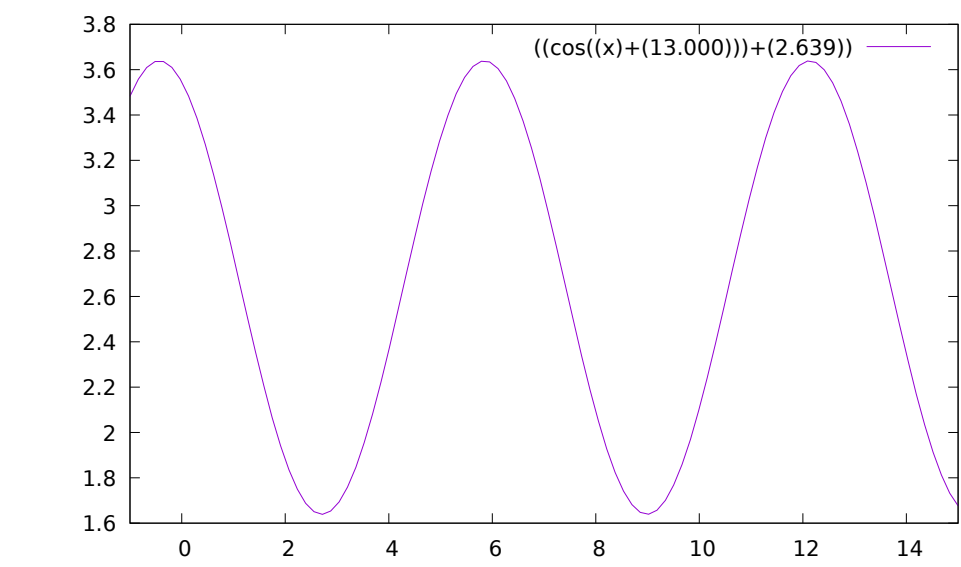
## 4 Exploration the expression as a function of the first variable

Now let's consider the expression as a function of a variable:  $f(a) = \cos(a + 13.000) + ?(inf)?$

**Decomposing on Macloren's formula** Maklorens formula for  $a \rightarrow a_0 = 3.142$ :

$f(a) = ?(inf)? + 0.420 \cdot (a - 3.142) + 0.454 \cdot (a - 3.142)^{2.000} + (-0.070) \cdot (a - 3.142)^{3.000} + o((a - 3.142)^{3.000})$

Graphics    **Graph**  $f(a) = \cos(a + 13.000) + ?(inf)?$  on the diapasone  $a \in [-1 : 15]$  :



Equations in the point    **Tangent equation** in the point  $a_0 = 0.200$ :

$f(a) = (-0.592) \cdot (a - 0.200) + ?(inf)?$

**Normal equation** in the point  $a_0 = 0.200$ :

$f(a) = 1.689 \cdot (a - 0.200) + ?(inf)?$

Their graphs in  $\delta = 2.50000$  coverage of the point  $a_0 = 0.200000$

