# 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
*Tanget 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) = $\cos(a + \frac{kek}{0.000^{89.000}}) + \ln(1.000 + x \cdot kek \cdot (0.000 - 1.000^{(\ln kek)}))$
Firstly, let's simplify this expression (if possible): f(a, kek, x) = $\cos(a + \frac{kek}{0.000}) + \ln(1.000 + x \cdot kek \cdot (-1.000) \cdot 1.000)$

# 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:
$(-1.000)' = \ldots = [\text{top secret}] = \ldots =$
$= 0.000$
`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 $0.000$
My roommate mumbled it in his sleep all night:
$(0.000)' = \ldots = [\text{top secret}] = \ldots =$
$= 0.000$
`10 step:` Finding a derivation of $kek$
Man... Just look:
$(kek)' =$
$= 1.000$
`11 step:` Finding a derivation of $\frac{kek}{0.000}$
I was asked not to tell anyone that:
$(\frac{kek}{0.000})' =$
$= 0.000$
`12 step:` Finding a derivation of $a$
When I was child, my father always told me: "Remember, son:
$(a)' = \ldots = [\text{top secret}] = \ldots =$
$= 1.000$
`13 step:` Finding a derivation of $a + \frac{kek}{0.000}$
thanks to the results of my colleagues' scientific work, I know that:
$(a + \frac{kek}{0.000})' =$
$= 1.000$
`14 step:` Finding a derivation of $\cos(a + \frac{kek}{0.000})$
A true prince must know that:
$(\cos(a + \frac{kek}{0.000}))' =$
$= (-1.000) \cdot \sin(a + \frac{kek}{0.000})$
`15 step:` Finding a derivation of $\cos(a + \frac{kek}{0.000}) + \ln(1.000 + (-1.000) \cdot x \cdot kek)$
If someone asked me that in the middle of the night, I wouldn't hesitate to say:

$(\cos(a + \frac{kek}{0.000}) + \ln(1.000 + (-1.000) \cdot x \cdot kek))' =$
$= (-1.000) \cdot \sin(a + \frac{kek}{0.000}) + \frac{1.000}{1.000+(-1.000)\cdot x\cdot kek} \cdot (-1.000) \cdot (kek + x)$
Congratulations! **The first derivation of the expression** is:
f'(a, kek, x) $= (-1.000) \cdot \sin(a + \frac{kek}{0.000}) + \frac{1.000}{1.000+(-1.000)\cdot x\cdot kek} \cdot (-1.000) \cdot (kek + x)$
In the point $M_0(a_0,\ kek_0,\ x_0) = (3.142,\ 13.000,\ 1.000)$ it's value = -nan

**Finding the 2 derivation** Let's find **the 1 derivation** of the expression:
`1 step:` Finding a derivation of $kek$
What if:
$(kek)' =$ ... = [top secret] = ... =
$= 1.000$
`2 step:` Finding a derivation of $x$
thanks to the results of my colleagues' scientific work, I know that:
$(x)' =$ ... = [top secret] = ... =
$= 1.000$
`3 step:` Finding a derivation of $x \cdot kek$
While preparing for exams, I learned a lot of new things, for example:
$(x \cdot kek)' =$ ... = [top secret] = ... =
$= kek + x$
`4 step:` Finding a derivation of $-1.000$
It's really easy to find:
$(-1.000)' =$
$= 0.000$
`5 step:` Finding a derivation of $(-1.000) \cdot x \cdot kek$
If someone asked me that in the middle of the night, I wouldn't hesitate to say:
$((-1.000) \cdot x \cdot kek)' =$
$= (-1.000) \cdot (kek + x)$
`6 step:` Finding a derivation of $1.000$
I spend the hole of my life to find the answer and finally it's:
$(1.000)' =$ ... = [top secret] = ... =
$= 0.000$
`7 step:` Finding a derivation of $1.000 + (-1.000) \cdot x \cdot kek$
I spend the hole of my life to find the answer and finally it's:
$(1.000 + (-1.000) \cdot x \cdot kek)' =$
$= (-1.000) \cdot (kek + x)$
`8 step:` Finding a derivation of $\ln(1.000 + (-1.000) \cdot x \cdot kek)$
For centuries, people have hunted for the secret knowledge that:
$(\ln(1.000 + (-1.000) \cdot x \cdot kek))' =$
$= \frac{1.000}{1.000+(-1.000)\cdot x\cdot kek} \cdot (-1.000) \cdot (kek + x)$
`9 step:` Finding a derivation of $0.000$
A true prince must know that:
$(0.000)' =$
$= 0.000$
`10 step:` Finding a derivation of $kek$
I was asked not to tell anyone that:
$(kek)' =$ ... = [top secret] = ... =
$= 1.000$
`11 step:` Finding a derivation of $\frac{kek}{0.000}$
While preparing for exams, I learned a lot of new things, for example:
$(\frac{kek}{0.000})' =$
$= 0.000$
`12 step:` Finding a derivation of $a$
I was asked not to tell anyone that:
$(a)' =$
$= 1.000$
`13 step:` Finding a derivation of $a + \frac{kek}{0.000}$
Man... Just look:
$(a + \frac{kek}{0.000})' =$ ... = [top secret] = ... =
$= 1.000$
`14 step:` Finding a derivation of $\cos(a + \frac{kek}{0.000})$
A true prince must know that:
$(\cos(a + \frac{kek}{0.000}))' =$
$= (-1.000) \cdot \sin(a + \frac{kek}{0.000})$
`15 step:` Finding a derivation of $\cos(a + \frac{kek}{0.000}) + \ln(1.000 + (-1.000) \cdot x \cdot kek)$
Man... Just look:
$(\cos(a + \frac{kek}{0.000}) + \ln(1.000 + (-1.000) \cdot x \cdot kek))' =$
$= (-1.000) \cdot \sin(a + \frac{kek}{0.000}) + \frac{1.000}{1.000+(-1.000)\cdot x\cdot kek} \cdot (-1.000) \cdot (kek + x)$
Let's find **the 2 derivation** of the expression:
`1 step:` Finding a derivation of $x$
It's really easy to find:
$(x)' =$ ... = [top secret] = ... =
$= 1.000$
`2 step:` Finding a derivation of $kek$
My roommate mumbled it in his sleep all night:
$(kek)' =$ ... = [top secret] = ... =
$= 1.000$
`3 step:` Finding a derivation of $kek + x$
It's simple as fuck:
$(kek + x)' =$
$= 2.000$
`4 step:` Finding a derivation of $-1.000$
A true prince must know that:
$(-1.000)' =$ ... = [top secret] = ... =
$= 0.000$
`5 step:` Finding a derivation of $(-1.000) \cdot (kek + x)$
It's really easy to find:
$((-1.000) \cdot (kek + x))' =$
$= -2.000$
`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 $x$
A true prince must know that:
$(x)' = \dots = [\text{top secret}] = \dots =$
$= 1.000$
`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 $-1.000$
Sounds logical that it is the same as:
$(-1.000)' =$
$= 0.000$
`10 step:` Finding a derivation of $(-1.000) \cdot x \cdot kek$
I was asked not to tell anyone that:
$((-1.000) \cdot x \cdot kek)' =$
$= (-1.000) \cdot (kek + x)$
`11 step:` Finding a derivation of $1.000$
My friends always beat me, because I didn't know that:
$(1.000)' = \dots = [\text{top secret}] = \dots =$
$= 0.000$
`12 step:` Finding a derivation of $1.000 + (-1.000) \cdot x \cdot kek$
My roommate mumbled it in his sleep all night:
$(1.000 + (-1.000) \cdot x \cdot kek)' =$
$= (-1.000) \cdot (kek + x)$
`13 step:` Finding a derivation of $1.000$
My roommate mumbled it in his sleep all night:
$(1.000)' = \dots = [\text{top secret}] = \dots =$
$= 0.000$
`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 $\frac{1.000}{1.000+(-1.000)\cdot x\cdot kek} \cdot (-1.000) \cdot (kek + x)$
Even my two-aged sister knows that:
$(\frac{1.000}{1.000+(-1.000)\cdot x\cdot kek} \cdot (-1.000) \cdot (kek + x))' =$
$= \frac{(-1.000)\cdot(-1.000)\cdot(kek+x)}{(1.000+(-1.000)\cdot x\cdot kek)^{2.000}} \cdot (-1.000) \cdot (kek + x) + (-2.000) \cdot \frac{1.000}{1.000+(-1.000)\cdot x\cdot kek}$
`16 step:` Finding a derivation of $0.000$
My roommate mumbled it in his sleep all night:
$(0.000)' = \dots = [\text{top secret}] = \dots =$
$= 0.000$
`17 step:` Finding a derivation of $kek$
My roommate mumbled it in his sleep all night:
$(kek)' = \dots = [\text{top secret}] = \dots =$
$= 1.000$
`18 step:` Finding a derivation of $\frac{kek}{0.000}$
I was asked not to tell anyone that:
$(\frac{kek}{0.000})' =$
$= 0.000$
`19 step:` Finding a derivation of $a$
Even my two-aged sister knows that:
$(a)' = \dots = [\text{top secret}] = \dots =$
$= 1.000$
`20 step:` Finding a derivation of $a + \frac{kek}{0.000}$
A true prince must know that:
$(a + \frac{kek}{0.000})' =$
$= 1.000$
`21 step:` Finding a derivation of $\sin(a + \frac{kek}{0.000})$
I was asked not to tell anyone that:
$(\sin(a + \frac{kek}{0.000}))' =$
$= \cos(a + \frac{kek}{0.000})$
`22 step:` Finding a derivation of $-1.000$
Sounds logical that it is the same as:
$(-1.000)' =$
$= 0.000$
`23 step:` Finding a derivation of $(-1.000) \cdot \sin(a + \frac{kek}{0.000})$
I was asked not to tell anyone that:
$((-1.000) \cdot \sin(a + \frac{kek}{0.000}))' = \dots = [\text{top secret}] = \dots =$
$= (-1.000) \cdot \cos(a + \frac{kek}{0.000})$
`24 step:` Finding a derivation of $(-1.000) \cdot \sin(a + \frac{kek}{0.000}) + \frac{1.000}{1.000+(-1.000)\cdot x\cdot kek} \cdot (-1.000) \cdot (kek + x)$
It's really easy to find:
$((-1.000) \cdot \sin(a + \frac{kek}{0.000}) + \frac{1.000}{1.000+(-1.000)\cdot x\cdot kek} \cdot (-1.000) \cdot (kek + x))' =$
$= (-1.000) \cdot \cos(a + \frac{kek}{0.000}) + \frac{(-1.000)\cdot(-1.000)\cdot(kek+x)}{(1.000+(-1.000)\cdot x\cdot kek)^{2.000}} \cdot (-1.000) \cdot (kek + x) + (-2.000) \cdot \frac{1.000}{1.000+(-1.000)\cdot x\cdot kek}$
**Finally... The 2 derivation of the expression:**
$f^{(2)}(\text{a, kek, x}) = (-1.000) \cdot \cos(a + \frac{kek}{0.000}) + \frac{(-1.000)\cdot(-1.000)\cdot(kek+x)}{(1.000+(-1.000)\cdot x\cdot kek)^{2.000}} \cdot (-1.000) \cdot (kek + x) + (-2.000) \cdot \frac{1.000}{1.000+(-1.000)\cdot x\cdot kek}$
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 = -nan

**Finding partical derivations** Partial derivation of the expression on the variable a:
$\frac{\partial f}{\partial a} = (-1.000) \cdot \sin(a + inf)$
In the point $M_0(a_0,\ kek_0,\ x_0) = (3.142,\ 13.000,\ 1.000)$ it's value = -nan !!!
Partial derivation of the expression on the variable kek:
$\frac{\partial f}{\partial kek} = (-1.000) \cdot \frac{1.000}{1.000+(-1.000)\cdot kek}$
In the point $M_0(a_0,\ kek_0,\ x_0) = (3.142,\ 13.000,\ 1.000)$ it's value = 0.08333 !!!
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 !!!

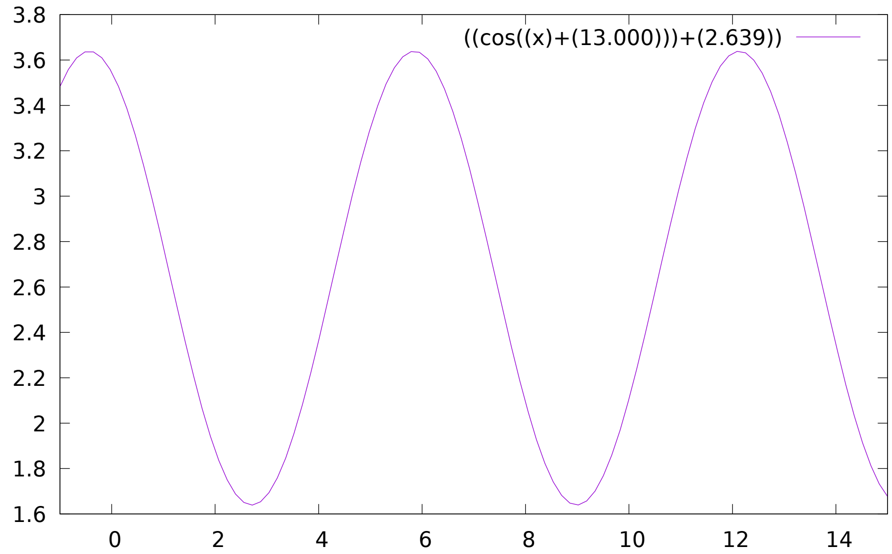
**Finding full derivation** Full derivation:
$\sqrt{((-1.000)\cdot\sin{(a+inf)})^{2.000} + ((-1.000)\cdot\frac{1.000}{1.000+(-1.000)\cdot kek})^{2.000} + ((-13.000)\cdot\frac{1.000}{1.000+(-1.000)\cdot 13.000\cdot x})^{2.000}}$
In the point $M_0(a_0,\, kek_0,\, x_0) = (3.142,\, 13.000,\, 1.000)$ it's value = -nan !!!

# 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) $= \cos{(a+inf)} + ?(inf)?$

**Decomposing on Macloren's formula** **Maklorens formula for** $a \to a_0 = 3.142$:
f(a) $= ?(inf)? + ?(inf)? \cdot (a-3.142) + ?(inf)? \cdot (a-3.142)^{2.000} + ?(inf)? \cdot (a-3.142)^{3.000}$+o$((a-3.142)^{3.000})$

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




**Equations in the point** **Tangent equation** in the point $a_0 = 0.200$:
f(a) $= ?(inf)? \cdot (a-0.200) + ?(inf)?$
**Normal equation** in the point $a_0 = 0.200$:
f(a) $= ?(inf)? \cdot (a-0.200) + ?(inf)?$
Their graphs in $\delta = 2.50000$ coverage of the point $a_0 = 0.200000$