This is the beginning of an exciting subtraction of derivatives. Relax and enjoy!

By Tuzman Alexander
December 17, 2020



1 This is subtraction of 1'st derivative

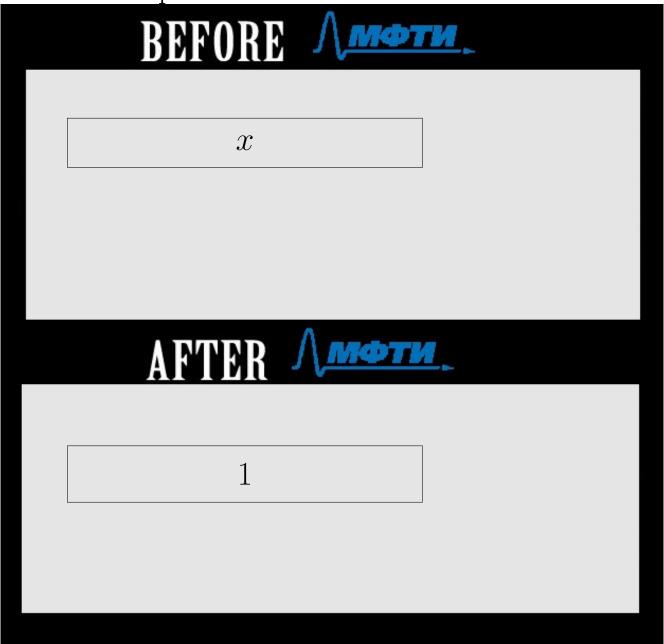
Let's make simpler $\sin(3+7+1+x)+(\cos(x))^2$ Now this expression simpled to $\sin(11+x)+(\cos(x))^2$

I have a problem, doctor. Nobody understands me.

$$\sin(3+7+1+x)+(\cos(x))^2$$

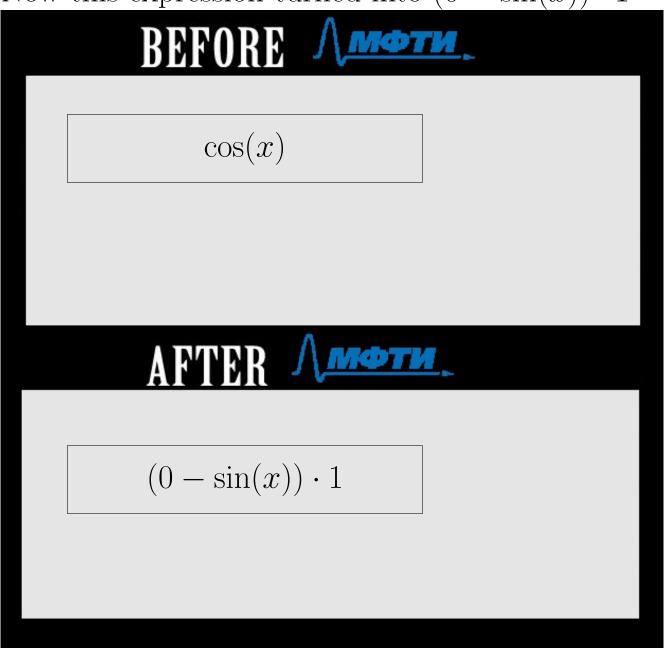


$$\sin(11+x) + (\cos(x))^2$$



Let's differentiate cos(x)

Now this expression turned into $(0 - \sin(x)) \cdot 1$



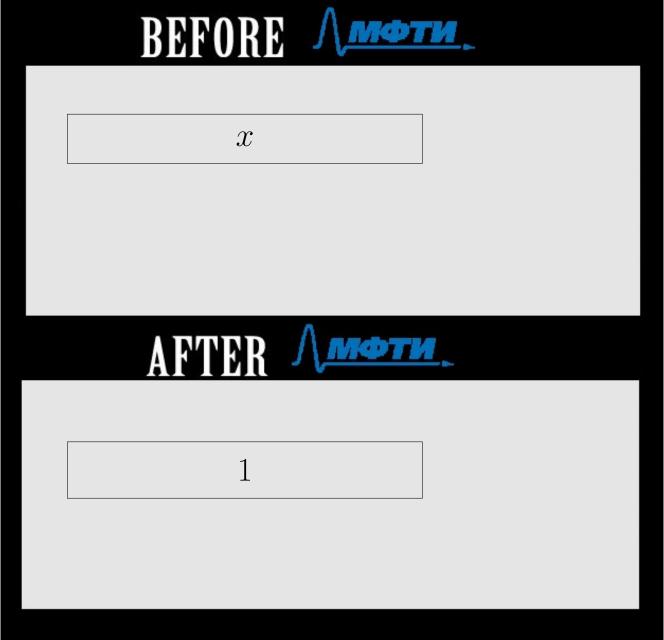
Let's differentiate $(\cos(x))^2$ Now this expression turned into $(\cos(x))^{2-1} \cdot 2 \cdot (0 - \sin(x)) \cdot 1$

BEFORE / MOTH

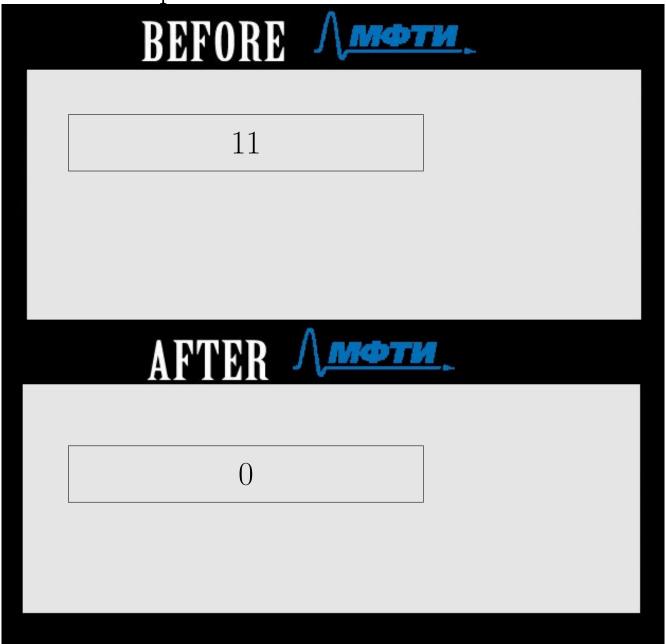
 $(\cos(x))^2$

AFTER AFTER.

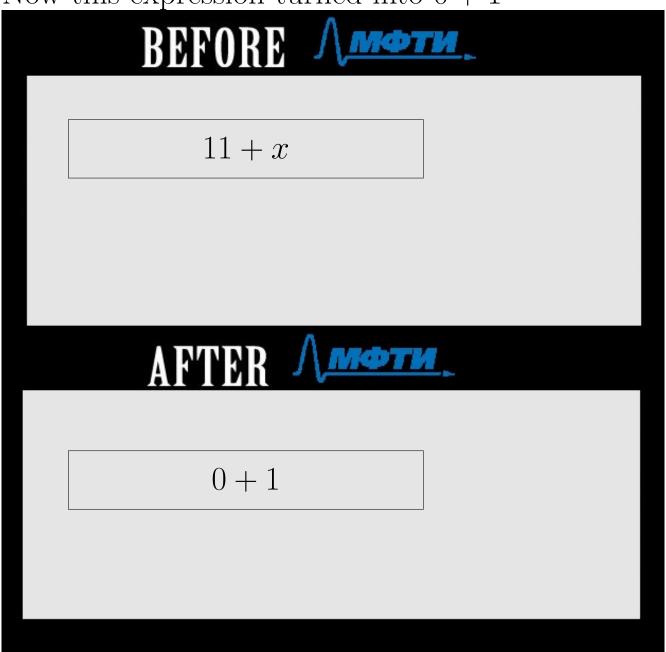
$$(\cos(x))^{2-1} \cdot 2 \cdot (0 - \sin(x)) \cdot 1$$



Let's differentiate 11 Now this expression turned into 0



Let's differentiate 11 + xNow this expression turned into 0 + 1



Let's differentiate $\sin(11 + x)$

Now this expression turned into $\cos(11+x)\cdot(0+1)$

BEFORE /MOTH.

$$\sin(11+x)$$

AFTER AFTER.

$$\cos(11+x)\cdot(0+1)$$

Let's differentiate $\sin(11+x) + (\cos(x))^2$ Now this expression turned into $\cos(11+x) \cdot (0+1) + (\cos(x))^{2-1} \cdot 2 \cdot (0-\sin(x)) \cdot 1$

BEFORE / MOTH.

$$\sin(11+x) + (\cos(x))^2$$

AFTER AFTER.

$$\cos(11+x)\cdot(0+1) + (\cos(x))^{2-1}\cdot 2\cdot(0-x)$$
$$\sin(x))\cdot 1$$

Let's make simpler $\cos(11+x)\cdot(0+1)+(\cos(x))^{2-1}\cdot 2\cdot(0-\sin(x))\cdot 1$

Now this expression simpled to $\cos(11+x)+\cos(x)$. $2 \cdot \sin(x)$

I have a problem, doctor. Nobody understands me.

$$\cos(11 + x) \cdot (0 + 1) + (\cos(x))^{2-1} \cdot 2 \cdot (0 - \sin(x)) \cdot 1$$



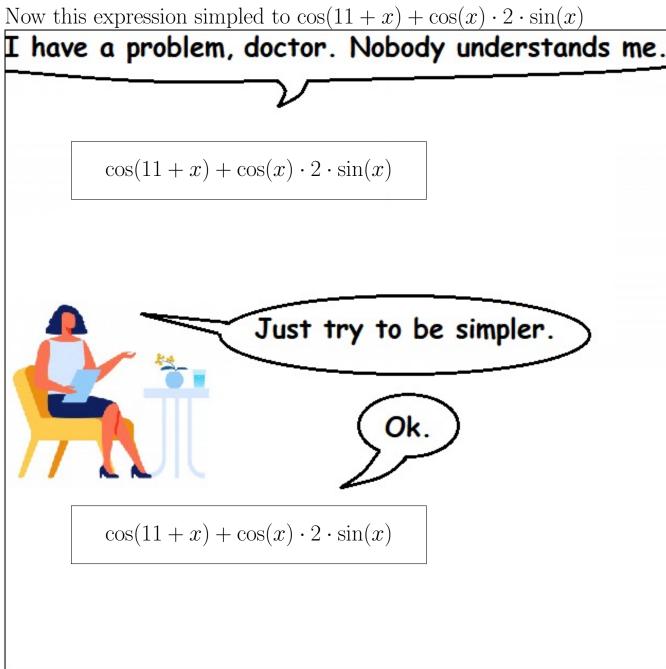
Ok.

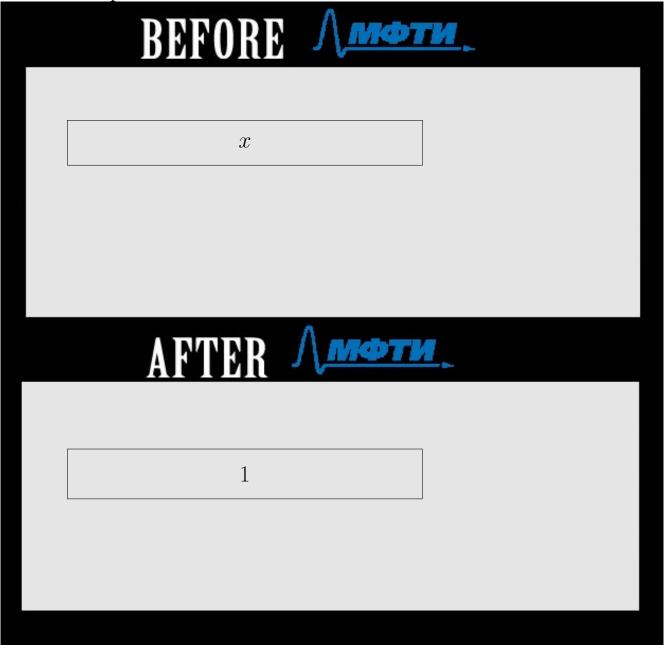
$$\cos(11+x) + \cos(x) \cdot 2 \cdot \sin(x)$$

$$\cos(11+x) + \cos(x) \cdot 2 \cdot \sin(x)$$

2 This is subtraction of 2'st derivative

Let's make simpler $\cos(11+x) + \cos(x) \cdot 2 \cdot \sin(x)$ Now this expression simpled to $\cos(11+x) + \cos(x) \cdot 2 \cdot \sin(x)$



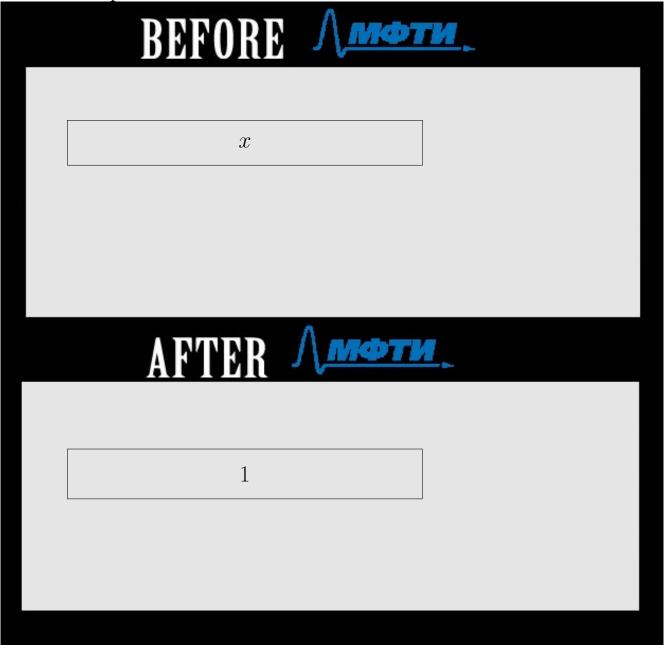


Let's differentiate sin(x)

Now this expression turned into $cos(x) \cdot 1$

BEFORE \motion.	
$\sin(x)$	
AFTER /	
$\cos(x) \cdot 1$	

BEFORE	<u>/\мфт</u>	<u>'M</u> _	
2			
AFTER J	\ <u>мфти</u>	<u> </u>	
0			
· ·			



Let's differentiate cos(x)

Now this expression turned into $(0 - \sin(x)) \cdot 1$

BEFORE /	<u>u</u> _
$\cos(x)$	
AFTER /	
$(0 - \sin(x)) \cdot 1$	

Let's differentiate $\cos(x) \cdot 2$

Now this expression turned into $(0 - \sin(x)) \cdot 1 \cdot 2 + \cos(x) \cdot 0$

BEFORE / MOTH

$$\cos(x) \cdot 2$$

AFTER AFTER.

$$(0 - \sin(x)) \cdot 1 \cdot 2 + \cos(x) \cdot 0$$

Let's differentiate $\cos(x) \cdot 2 \cdot \sin(x)$

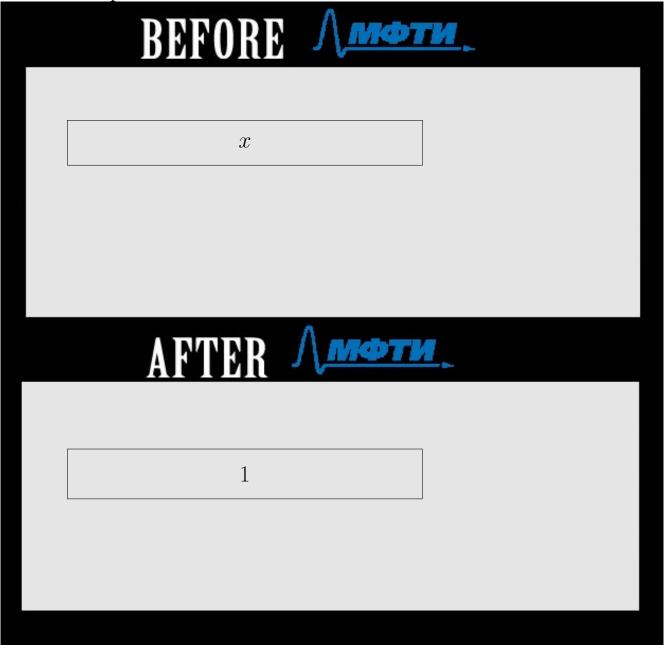
Now this expression turned into $((0-\sin(x))\cdot 1\cdot 2+\cos(x)\cdot 0)\cdot \sin(x)+\cos(x)\cdot 2\cdot \cos(x)\cdot 1$

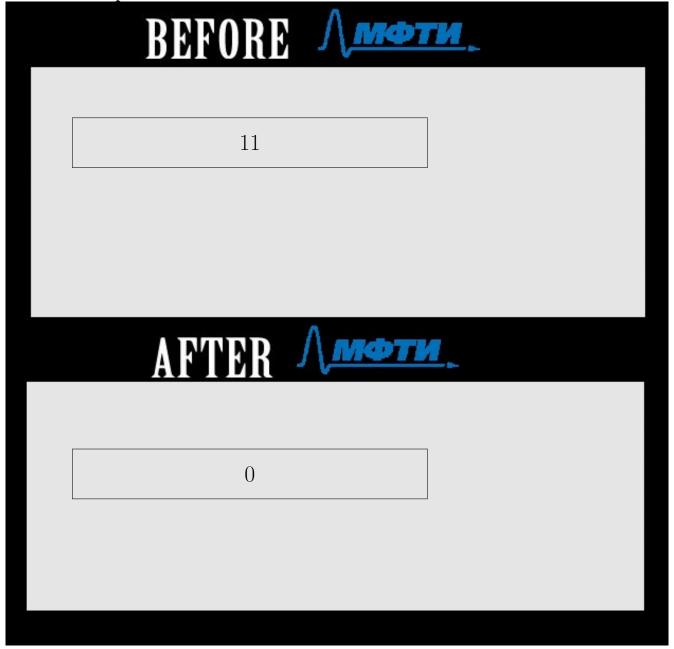
BEFORE / MOTH

$$\cos(x) \cdot 2 \cdot \sin(x)$$

AFTER / MOTU.

$$\frac{((0-\sin(x))\cdot 1\cdot 2+\cos(x)\cdot 0)\cdot}{\sin(x)+\cos(x)\cdot 2\cdot \cos(x)\cdot 1}$$





Let's differentiate 11 + x

BEFORE /\mo	
11 + x	
AFTER /	<u> </u>
0+1	

Let's differentiate $\cos(11+x)$

Now this expression turned into $(0 - \sin(11 + x)) \cdot (0 + 1)$

BEFORE / MOTH.

$$\cos(11+x)$$

AFTER /MOTH.

$$(0 - \sin(11 + x)) \cdot (0 + 1)$$

Let's differentiate $\cos(11+x)+\cos(x)\cdot 2\cdot \sin(x)$ Now this expression turned into $(0-\sin(11+x))\cdot (0+1)+((0-\sin(x))\cdot 1\cdot 2+\cos(x)\cdot 0)\cdot \sin(x)+\cos(x)\cdot 2\cdot \cos(x)\cdot 1$

BEFORE / MOTH.

$$\cos(11+x) + \cos(x) \cdot 2 \cdot \sin(x)$$

AFTER / MOTH

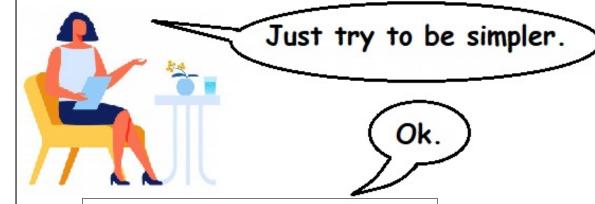
$$\begin{array}{l} (0 - \sin(11 + x)) \cdot (0 + 1) + ((0 - \sin(x)) \cdot 1 \cdot \\ 2 + \cos(x) \cdot 0) \cdot \sin(x) + \cos(x) \cdot 2 \cdot \cos(x) \cdot 1 \end{array}$$

Let's make simpler $(0 - \sin(11 + x)) \cdot (0 + 1) + ((0 - \sin(x)) \cdot 1 \cdot 2 + \cos(x) \cdot 0) \cdot \sin(x) + \cos(x) \cdot 2 \cdot \cos(x) \cdot 1$

Now this expression simpled to $\sin(11+x) + \sin(x) \cdot 2 \cdot \sin(x) + \cos(x) \cdot 2 \cdot \cos(x)$

I have a problem, doctor. Nobody understands me.

$$\begin{array}{l} (0 - \sin(11 + x)) \cdot (0 + 1) + ((0 - \sin(x)) \cdot 1 \cdot 2 + \cos(x) \cdot 0) \cdot \sin(x) + \cos(x) \cdot 2 \cdot \cos(x) \cdot 1 \end{array}$$



$$\sin(11+x) + \sin(x) \cdot 2 \cdot \sin(x) + \cos(x) \cdot 2 \cdot \cos(x)$$

$$\sin(11+x) + \sin(x) \cdot 2 \cdot \sin(x) + \cos(x) \cdot 2 \cdot \cos(x)$$
That is all!

