

«I fucking love science»

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## I Getting superhard tangent

$$\ln(\arctan(x + x)^2)^2. \tag{1}$$

Lets find the tangent!

We must differentiate expression to find tangent parameters.

Starting differentiation... After elementary simplifications, it is obvious that it is equal to

$$\frac{1}{1 + A_1} \cdot 2 \cdot (B_1^{C_1}) \cdot \frac{1}{\arctan(D_1)^2} \cdot 2 \cdot (\ln(E_1^2)^{2-1}).$$

$$\begin{aligned} A_1 &= (x + x)^2. \\ B_1 &= \arctan(x + x). \\ C_1 &= 2 - 1. \\ D_1 &= x + x. \\ E_1 &= \arctan(x + x). \end{aligned} \tag{2}$$

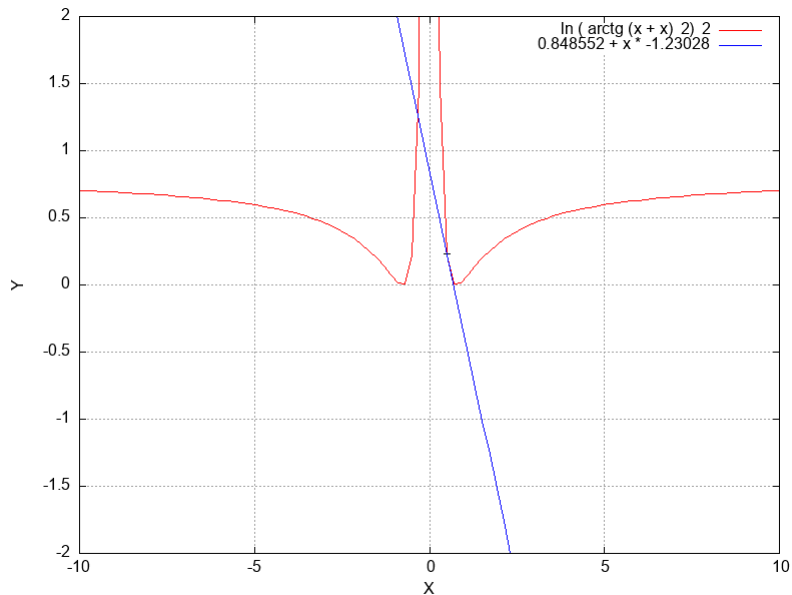
Lets simplify this expression. At that very lecture you missed, it was proved that this is equal to

$$\frac{1}{1 + A_1} \cdot 2 \cdot \arctan(B_1) \cdot \frac{1}{\arctan(C_1)^2} \cdot 2 \cdot \ln(\arctan(D_1)^2).$$

$$\begin{aligned} A_1 &= (x + x)^2. \\ B_1 &= x + x. \\ C_1 &= x + x. \\ D_1 &= x + x. \end{aligned} \tag{3}$$

Looks impressive. Still not as impressive as this dance from tiktok([1](#)), so, we must made another transformation

$$0.848552 + x \cdot -1.23028. \tag{4}$$



## II Getting superhard Taylor series

Lets find taylor series of:

$$\sin(x) + \cos(x). \quad (5)$$

We need to differentiate this:

$$\sin(x) + \cos(x). \quad (6)$$

Starting differentiation... Zhirinovsky suggested (2) to do this simplification

$$1 \cdot \cos(x) + -1 \cdot 1 \cdot \sin(x). \quad (7)$$

Lets simplify this expression. At that very lecture you missed, it was proved that this is equal to

$$\cos(x) + -1 \cdot \sin(x). \quad (8)$$

We need to differentiate this:

$$\cos(x) + -1 \cdot \sin(x). \quad (9)$$

Starting differentiation... I would justify this transition, but the article will be more useful if you do it yourself

$$-1 \cdot 1 \cdot \sin(x) + 0 \cdot \sin(x) + -1 \cdot 1 \cdot \cos(x). \quad (10)$$

Lets simplify this expression. ARE YOU SURPRISED????(3) It is clear to the hedgehog that this is the same as

$$-1 \cdot \sin(x) + -1 \cdot \cos(x). \quad (11)$$

We need to differentiate this:

$$-1 \cdot \sin(x) + -1 \cdot \cos(x). \quad (12)$$

Starting differentiation... Zhirinovsky suggested (2) to do this simplification

$$\begin{aligned} 0 \cdot \sin(x) + -1 \cdot 1 \cdot \cos(x) + 0 \cdot \cos(x) + -1 \cdot -1 \cdot 1 \cdot A_1. \\ A_1 = \sin(x). \end{aligned} \quad (13)$$

Lets simplify this expression. A fitness trainer from Simferopol(4) threatens to beat you if you don't continue the transformation

$$-1 \cdot \cos(x) + -1 \cdot -1 \cdot \sin(x). \quad (14)$$

We need to differentiate this:

$$-1 \cdot \cos(x) + -1 \cdot -1 \cdot \sin(x). \quad (15)$$

Starting differentiation... Let's not bother with obvious proof that this is

$$\begin{aligned} 0 \cdot \cos(x) + -1 \cdot -1 \cdot 1 \cdot A_1 + 0 \cdot -1 \cdot \sin(x) + -1 \cdot (0 \cdot B_1 + -1 \cdot C_1). \\ A_1 = \sin(x). \\ B_1 = \sin(x). \\ C_1 = 1 \cdot \cos(x). \end{aligned} \quad (16)$$

Lets simplify this expression. Are you really still reading this?

$$-1 \cdot -1 \cdot \sin(x) + -1 \cdot -1 \cdot \cos(x). \quad (17)$$

We need to differentiate this:

$$-1 \cdot -1 \cdot \sin(x) + -1 \cdot -1 \cdot \cos(x). \quad (18)$$

Starting differentiation... A fitness trainer from Simferopol(4) threatens to beat you if you don't continue the transformation

$$\begin{aligned} 0 \cdot -1 \cdot \sin(x) + -1 \cdot (0 \cdot A_1 + -1 \cdot B_1) + 0 \cdot -1 \cdot \cos(x) + -1 \cdot (0 \cdot C_1 + -1 \cdot D_1). \\ A_1 = \sin(x). \\ B_1 = 1 \cdot \cos(x). \\ C_1 = \cos(x). \\ D_1 = -1 \cdot 1 \cdot \sin(x). \end{aligned} \quad (19)$$

Lets simplify this expression. Some guy from asylum (5) told me that this is equal to

$$-1 \cdot -1 \cdot \cos(x) + -1 \cdot -1 \cdot -1 \cdot \sin(x). \quad (20)$$

We need to differentiate this:

$$-1 \cdot -1 \cdot \cos(x) + -1 \cdot -1 \cdot -1 \cdot \sin(x). \quad (21)$$

Starting differentiation... After elementary simplifications, it is obvious that it is equal to

$$\begin{aligned} 0 \cdot -1 \cdot \cos(x) + -1 \cdot (0 \cdot A_1 + -1 \cdot B_1) + 0 \cdot -1 \cdot -1 \cdot C_1 + -1 \cdot (0 \cdot D_1 + -1 \cdot (E_1)). \\ A_1 = \cos(x). \\ B_1 = -1 \cdot 1 \cdot \sin(x). \\ C_1 = \sin(x). \\ D_1 = -1 \cdot \sin(x). \\ E_1 = 0 \cdot \sin(x) + -1 \cdot 1 \cdot \cos(x). \end{aligned} \quad (22)$$

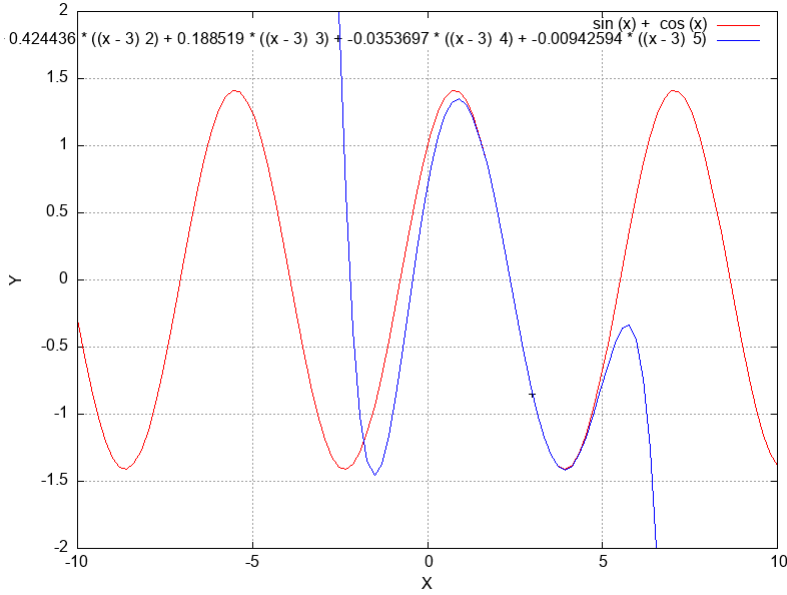
Lets simplify this expression. Are you really still reading this?

$$-1 \cdot -1 \cdot -1 \cdot \sin(x) + -1 \cdot -1 \cdot -1 \cdot \cos(x). \quad (23)$$

Lets simplify this expression. This explanation is available only for premium readers of this article (4862 8784 4592 1552)

$$\begin{aligned}
&A_1 + B_1 + 0.424436 \cdot (C_1) + 0.188519 \cdot ((D_1)^3) + -0.0353697 \cdot ((x-3)^4) + -0.00942594 \cdot ((x-3)^5). \\
&A_1 = -0.848872 \cdot 1. \\
&B_1 = -1.13111 \cdot (x-3). \\
&C_1 = (x-3)^2. \\
&D_1 = x-3.
\end{aligned}
\tag{24}$$

Taylor series is:  $-0.848872 + -1.13111 \cdot (x-3) + 0.424436 \cdot ((x-3)^2) + 0.188519 \cdot ((x-3)^3) + -0.0353697 \cdot ((x-3)^4) + -0.00942594 \cdot ((x-3)^5) + o((x-3)^5)$ .



Lets find out difference between:

$$\sin(x) + \cos(x).$$

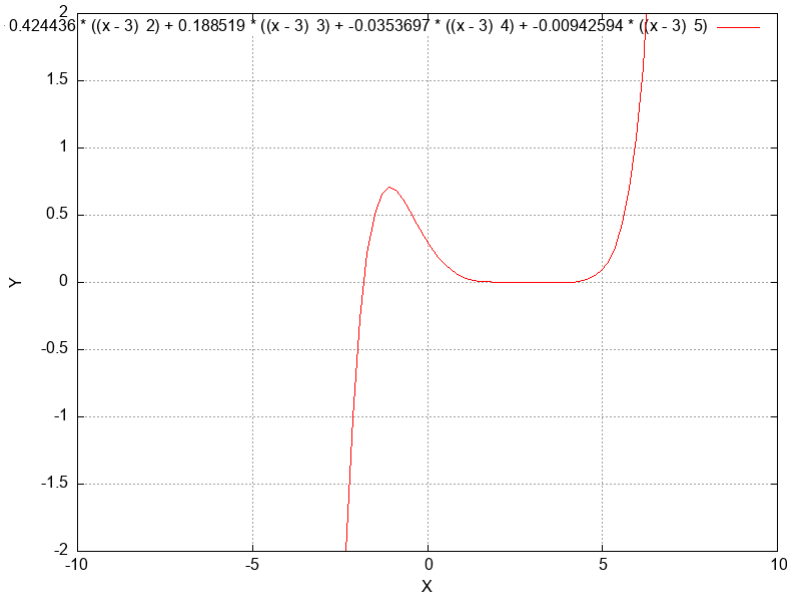
and

$$\begin{aligned}
&-0.848872 + A_1 + 0.424436 \cdot (B_1) + 0.188519 \cdot ((C_1)^3) + -0.0353697 \cdot ((x-3)^4) + -0.00942594 \cdot ((x-3)^5). \\
&A_1 = -1.13111 \cdot (x-3). \\
&B_1 = (x-3)^2. \\
&C_1 = x-3.
\end{aligned}
\tag{26}$$

Looks impressive. Still not as impressive as this dance from tiktok([1](#)), so, we must made another transformation

$$\begin{aligned}
&\sin(x) + \cos(x) - A_1 + B_1 + 0.188519 \cdot (C_1) + -0.0353697 \cdot ((D_1)^4) + -0.00942594 \cdot ((x-3)^5). \\
&A_1 = -0.848872 + -1.13111 \cdot (x-3). \\
&B_1 = 0.424436 \cdot ((x-3)^2). \\
&C_1 = (x-3)^3. \\
&D_1 = x-3.
\end{aligned}
\tag{27}$$

Lets simplify this expression. Oopsie, our expression is already too awesome.



### III Calculating too easy differentiation

$$\ln(\arctan(x + x)^2)^2.$$

(28)

LET'S DIFFERENTIATE THIS!!! Are you really still reading this?

$$\frac{1}{1 + A_1} \cdot 2 \cdot (B_1^{C_1}) \cdot \frac{1}{\arctan(D_1)^2} \cdot 2 \cdot (\ln(E_1^2)^{2-1}).$$

$$A_1 = (x + x)^2.$$

$$B_1 = \arctan(x + x).$$

$$C_1 = 2 - 1.$$

$$D_1 = x + x.$$

$$E_1 = \arctan(x + x).$$

(29)

Lets simplify this expression. After elementary simplifications, it is obvious that it is equal to

$$\frac{1}{1 + A_1} \cdot 2 \cdot \arctan(B_1) \cdot \frac{1}{\arctan(C_1)^2} \cdot 2 \cdot \ln(\arctan(D_1)^2).$$

$$A_1 = (x + x)^2.$$

$$B_1 = x + x.$$

$$C_1 = x + x.$$

$$D_1 = x + x.$$

(30)

LET'S DIFFERENTIATE THIS!!! Some guy from asylum (5) told me that this is equal to

$$\begin{aligned}
& ((A_1 + B_1) \cdot \frac{1}{C_1} + D_1 \cdot E_1 \cdot \frac{F_1}{G_1}) \cdot 2 \cdot \ln(H_1^2) + \frac{1}{I_1} \cdot 2 \cdot J_1 \cdot \frac{1}{K_1^2} \cdot (0 \cdot \ln(L_1) + 2 \cdot M_1 \cdot N_1). \\
& A_1 = \frac{0 \cdot (1 + A_2) - 1 \cdot (0 + B_2)}{(1 + (C_2)^2)^2} \cdot 2 \cdot \arctan(x + x). \\
& A_2 = (x + x)^2. \\
& B_2 = (1 + 1) \cdot 2 \cdot ((x + x)^{2-1}). \\
& C_2 = x + x. \\
& B_1 = \frac{1}{1 + (x + x)^2} \cdot (0 \cdot \arctan(x + x) + 2 \cdot \frac{1}{1 + A_3}). \\
& A_3 = (x + x)^2. \\
& C_1 = \arctan(x + x)^2. \\
& D_1 = \frac{1}{1 + (x + x)^2}. \\
& E_1 = 2 \cdot \arctan(x + x). \\
& F_1 = 0 \cdot (\arctan(x + x)^2) - 1 \cdot \frac{1}{1 + A_7} \cdot 2 \cdot (B_7^{C_7}). \\
& A_7 = (x + x)^2. \\
& B_7 = \arctan(x + x). \\
& C_7 = 2 - 1. \\
& G_1 = (\arctan(x + x)^2)^2. \\
& H_1 = \arctan(x + x). \\
& I_1 = 1 + (x + x)^2. \\
& J_1 = \arctan(x + x). \\
& K_1 = \arctan(x + x). \\
& L_1 = \arctan(x + x)^2. \\
& M_1 = \frac{1}{1 + (x + x)^2} \cdot 2 \cdot (\arctan(x + x)^{2-1}). \\
& N_1 = \frac{1}{\arctan(x + x)^2}.
\end{aligned} \tag{31}$$

Lets simplify this expression. At that very lecture you missed, it was proved that this is equal to



$$((A_1 + B_1) \cdot \frac{1}{C_1} + D_1 \cdot E_1 \cdot \frac{F_1}{G_1}) \cdot 2 \cdot \ln(H_1^2) + \frac{1}{I_1} \cdot 2 \cdot J_1 \cdot \frac{1}{K_1^2} \cdot 2 \cdot L_1 \cdot M_1 \cdot \frac{1}{N_1}.$$

$$A_1 = \frac{0 - 2 \cdot 2 \cdot (A_2)}{(1 + (B_2)^2)^2} \cdot 2 \cdot \arctan(x + x).$$

$$A_2 = x + x.$$

$$B_2 = x + x.$$

$$B_1 = \frac{1}{1 + (x + x)^2} \cdot 2 \cdot \frac{1}{1 + (A_3)^2}.$$

$$A_3 = x + x.$$

$$C_1 = \arctan(x + x)^2.$$

$$D_1 = \frac{1}{1 + (x + x)^2}.$$

$$E_1 = 2 \cdot \arctan(x + x).$$

$$F_1 = 0 - \frac{1}{1 + (A_7)^2} \cdot 2 \cdot \arctan(x + x).$$

$$A_7 = x + x.$$

$$G_1 = (\arctan(x + x)^2)^2.$$

$$H_1 = \arctan(x + x).$$

$$I_1 = 1 + (x + x)^2.$$

$$J_1 = \arctan(x + x).$$

$$K_1 = \arctan(x + x).$$

$$L_1 = \frac{1}{1 + (x + x)^2}.$$

$$M_1 = 2 \cdot \arctan(x + x).$$

$$N_1 = \arctan(x + x)^2.$$

(32)

LET'S DIFFERENTIATE THIS!!! A fitness trainer from Simferopol([4](#)) threatens to beat you if you don't continue the transformation

$$(A_1+B_1+C_1+D_1)\cdot 2\cdot \ln(E_1)+((F_1)\cdot G_1+H_1\cdot I_1)\cdot (0\cdot J_1+2\cdot K_1)+((L_1)\cdot M_1+N_1\cdot O_1)\cdot 2\cdot P_1\cdot Q_1+R_1\cdot S_1\cdot \frac{1}{T_1}\cdot (0\cdot U_1+2\cdot$$

$$A_1=(\frac{A_2}{B_2}\cdot 2\cdot C_2+\frac{D_2}{E_2}\cdot (F_2+G_2)+\frac{H_2}{I_2}\cdot 2\cdot J_2+\frac{1}{K_2}\cdot (L_2+M_2))\cdot \frac{1}{\arctan(x+x)^2}.$$

$$A_2=(0-0\cdot A_3+2\cdot (B_3))\cdot ((1+(C_3)^2)^2)-(0-2\cdot 2\cdot (D_3))\cdot (0+(E_3)\cdot F_3)\cdot 2\cdot ((G_3)^{H_3}).$$

$$A_3=2\cdot (x+x).$$

$$B_3=0\cdot (x+x)+2\cdot (1+1).$$

$$C_3=x+x.$$

$$D_3=x+x.$$

$$E_3=1+1.$$

$$F_3=2\cdot ((x+x)^{2-1}).$$

$$G_3=1+(x+x)^2.$$

$$H_3=2-1.$$

$$B_2=((1+(x+x)^2)^2)^2.$$

$$C_2=\arctan(x+x).$$

$$D_2=0-2\cdot 2\cdot (x+x).$$

$$E_2=(1+(x+x)^2)^2.$$

$$F_2=0\cdot \arctan(x+x).$$

$$G_2=2\cdot \frac{1}{1+(x+x)^2}.$$

$$H_2=0\cdot (1+(x+x)^2)-1\cdot (0+(1+1)\cdot 2\cdot (A_{10})).$$

$$A_{10}=(x+x)^{2-1}.$$

$$I_2=(1+(x+x)^2)^2.$$

$$J_2=\frac{1}{1+(x+x)^2}.$$

$$K_2=1+(x+x)^2.$$

$$L_2=0\cdot \frac{1}{1+(x+x)^2}.$$

$$M_2=2\cdot \frac{0\cdot (1+A_{15})-1\cdot (0+B_{15})}{(1+(C_{15})^2)^2}.$$

$$A_{15}=(x+x)^2.$$

$$B_{15}=(1+1)\cdot 2\cdot ((x+x)^{2-1}).$$

$$C_{15}=x+x.$$

$$B_1=(\frac{0-A_3}{(B_3)^2}\cdot 2\cdot \arctan(C_3)+\frac{1}{1+D_3}\cdot 2\cdot \frac{1}{E_3})\cdot \frac{0\cdot (F_3^2)-1\cdot G_3\cdot H_3}{(\arctan(I_3)^2)^2}.$$

$$A_3=2\cdot 2\cdot (x+x).$$

$$B_3=1+(x+x)^2.$$

$$C_3=x+x.$$

$$D_3=(x+x)^2.$$

$$E_3=1+(x+x)^2.$$

$$F_3=\arctan(x+x).$$

$$G_3=\frac{1}{1+(x+x)^2}.$$

$$H_3=2\cdot (\arctan(x+x)^{2-1}).$$

$$I_3=x+x.$$

$$C_3=(\frac{A_4-B_4}{(B_3)^2}\cdot 2\cdot \arctan(D_3)+\frac{9}{1+D_3}\cdot (0\cdot F_3+2\cdot G_3))\cdot \frac{0-\frac{1}{H_4}\cdot 2\cdot I_4}{(\arctan(I_3)^2)^2}.$$

Lets simplify this expression. Let's not bother with obvious proof that this is

$$(A_1+B_1+C_1+D_1)\cdot 2\cdot \ln(E_1)+((F_1)\cdot G_1+H_1\cdot I_1)\cdot 2\cdot J_1\cdot K_1+((L_1)\cdot M_1+N_1\cdot O_1)\cdot 2\cdot P_1\cdot Q_1+R_1\cdot S_1\cdot \frac{1}{T_1}\cdot 2\cdot (U_1+V_1).$$

$$A_1=(\frac{A_2}{B_2}\cdot 2\cdot C_2+\frac{D_2}{E_2}\cdot 2\cdot F_2+\frac{G_2}{H_2}\cdot 2\cdot I_2+\frac{1}{J_2}\cdot 2\cdot K_2)\cdot \frac{1}{\arctan(x+x)^2}.$$

$$A_2=(0-2\cdot 4)\cdot ((1+(A_3)^2)^2)-(0-2\cdot 2\cdot (B_3))\cdot 2\cdot 2\cdot (C_3)\cdot 2\cdot (1+D_3).$$

$$A_3=x+x.$$

$$B_3=x+x.$$

$$C_3=x+x.$$

$$D_3=(x+x)^2.$$

$$B_2=((1+(x+x)^2)^2)^2.$$

$$C_2=\arctan(x+x).$$

$$D_2=0-2\cdot 2\cdot (x+x).$$

$$E_2=(1+(x+x)^2)^2.$$

$$F_2=\frac{1}{1+(x+x)^2}.$$

$$G_2=0-2\cdot 2\cdot (x+x).$$

$$H_2=(1+(x+x)^2)^2.$$

$$I_2=\frac{1}{1+(x+x)^2}.$$

$$J_2=1+(x+x)^2.$$

$$K_2=\frac{0-2\cdot 2\cdot (x+x)}{(1+(x+x)^2)^2}.$$

$$B_1=(\frac{0-A_3}{(B_3)^2}\cdot 2\cdot \arctan(C_3)+\frac{1}{1+D_3}\cdot 2\cdot \frac{1}{E_3})\cdot \frac{0-\frac{1}{F_3}\cdot 2\cdot G_3}{(\arctan(H_3)^2)^2}.$$

$$A_3=2\cdot 2\cdot (x+x).$$

$$B_3=1+(x+x)^2.$$

$$C_3=x+x.$$

$$D_3=(x+x)^2.$$

$$E_3=1+(x+x)^2.$$

$$F_3=1+(x+x)^2.$$

$$G_3=\arctan(x+x).$$

$$H_3=x+x.$$

$$C_1=(\frac{0-A_4}{(B_4)^2}\cdot 2\cdot \arctan(C_4)+\frac{1}{1+D_4}\cdot 2\cdot \frac{1}{E_4})\cdot \frac{0-\frac{1}{F_4}\cdot 2\cdot G_4}{(\arctan(H_4)^2)^2}.$$

$$A_4=2\cdot 2\cdot (x+x).$$

$$B_4=1+(x+x)^2.$$

$$C_4=x+x.$$

$$D_4=(x+x)^2.$$

$$E_4=1+(x+x)^2.$$

$$F_4=1+(x+x)^2.$$

$$G_4=\arctan(x+x).$$

$$H_4=x+x.$$

$$D_1=\frac{1}{1+(A_5)^2}\cdot 2\cdot \arctan(x+x)\cdot \frac{(0-B_5)\cdot ((C_5)^2)-(0-D_5)\cdot E_5\cdot F_5}{((G_5^2)^2)}.$$

$$A_5=1+x.$$

$$0-2\cdot A_7\cdot \arctan(x+x)\cdot \frac{1}{1+(A_5)^2}\cdot \frac{1}{1+(A_5)^2}$$

# Bibliography

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