"What to say in front of the blackboard"
a brief tutorial

$$\left(\ln\left(2\sin(x)+3\cos(x)\right)\right)' = \frac{1}{2\sin(x)+3\cos(x)} \cdot (2\cos x - 3\sin x) =$$

the derivative of natural logarithm of two sine of x plus three cosine of x

we calculate the derivative of the whole function what is equal: one over two sine of x plus three cosine of x

then, we multiply this by the derivative of two sine of x - that is equal two cosine of x

and next, we obtain the derivative of three cosine of x, obtaining minus three sine of x.

$$= \frac{2\cos x - 3\sin x}{2\sin(x)+3\cos(x)}$$

Finally we obtain two cosine of x minus three sine of x over two sine of x plus three cosine of x

$$\left(\sin\left(\arcsin(x)\right)\right)' = \cos(\arcsin(x)) \cdot \frac{1}{\sqrt{1+x^2}} = \frac{\cos(\arcsin(x))}{\sqrt{1+x^2}}$$

the derivative of sine of arc sine of x

we calculate the derivative of the whole function: sine of arc sine of x what gives us cosine of arc sine of x

and we multiply this by the derivative of arc sine of x (function in brackets) what is equal one over square root of one plus x square

Finally, we obtain cosine of arc sine of x divided by square root of one plus x square

$$\left(\left(\cos x\right)\cdot\sin\left(x^3+x^2+x+1\right)\right)' = \cos' x \cdot \sin(x^3+x^2+x+1) + \cos x \cdot \sin'(x^3+x^2+x+1) =$$

the derivative of cosine of x times the sine of x cubic plus x square plus x plus one

using the product rule we should calculate the derivative of the first function times the second function plus the first function times the derivative of the second function

$$= -\sin x \cdot \sin(x^3+x^2+x+1) + \cos x \cdot \cos(x^3+x^2+x+1)\cdot(3x^2+2x+1)$$

which finally gives us minus sine of x times sine of open bracket, x cubic plus x square plus x plus one, close bracket, plus cosine of x, times cosine of, open bracket, x cubic plus square plus x plus one, close bracket, times, in brackets: three x cubic plus two x plus one.

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