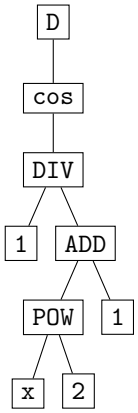
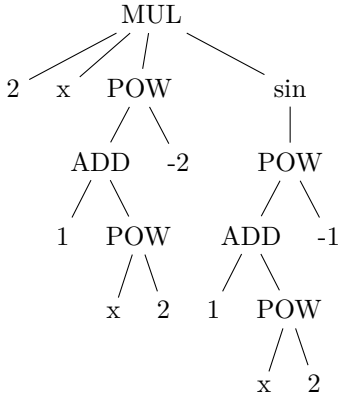
Hi! Consider the expression $\frac{d}{dx}(\cos\left(\frac{1}{x^2+1}\right))$. This autosimplifies to

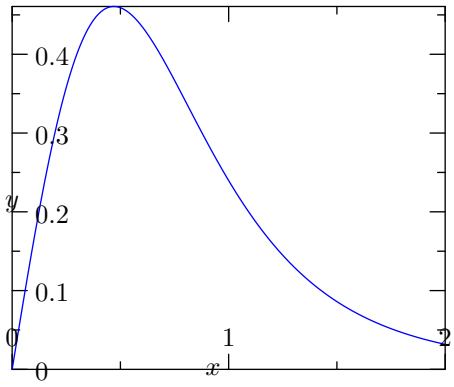
$$\frac{2x\sin\left(\left(1+x^2\right)^{-1}\right)}{\left(1+x^2\right)^2}.$$

```
(2 * x * ((1 + (x ^ 2)) ^ -2) * sin(((1 + (x ^ 2)) ^ -1)))
```



Here is the evaluated tree for $\frac{2x\sin\left(\left(1+x^2\right)^{-1}\right)}{\left(1+x^2\right)^2}$:





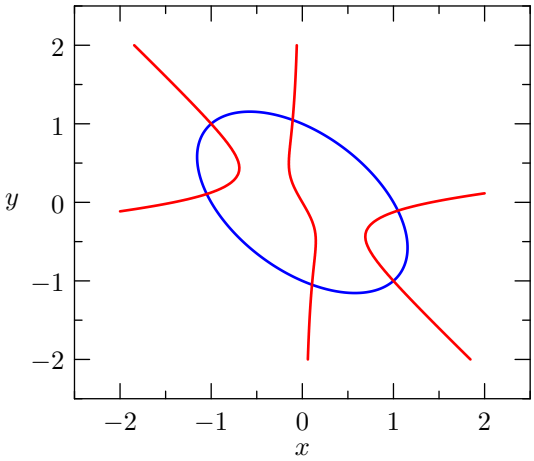
$2xf'\left(x^2\right)$

0

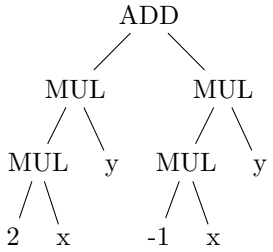
$x^2 + xy + y^2$ vs $x^2 + x * y + y^2$

$$f = x^3 - y + 2x^2y$$
$$f_x = 3x^2 + 4xy$$
$$f_y = -1 + 2x^2$$

$$2x - x^3 + y + 8x^2y + 8xy^2$$
$$x^2 + xy + y^2$$

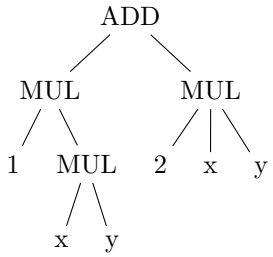


$2xy - xy$



x

$6xy$



Unequal

$3xy$