## second: session maxima take over, peter.vlasschaert@gmail.com,06/02/2022

MaximaControl("restart") = "Restart complete."

 $\sum \left( Diff \left( \sin \left( x \right) \right) \right) = \cos \left( x \right)$ 

use: **(■)** ,select for menu

MaximaTakeover("int") = "int() handled by Maxima"

$$v := \sin(x)$$
  $v1 := \sin(x \cdot y)$ 

Maxima Take Over int from smath:

1e step: int

use: after function use tab

2e step: press tab

3e step: select with cursor whole integral & ctrl +.

use: for evaluation = ctrl + ...

$$\int \sin(x) dx = -\cos(x)$$

Maxima: implimented

$$Int(sin(y); y) = -cos(y)$$

MaximaTakeover("diff") = "diff() handled by Maxima"

$$\sin(x)' = \cos(x)$$

$$\frac{d^2}{dx^2}v = -\sin(x)$$

Maxima: first order, Diff,tab

$$\frac{d}{dx}\sin(x) = \cos(x)$$

Maxima: first order, Diff,tab

$$Diff(v; x) = cos(x)$$

Maxima: higher order, Diff,tab,;

$$Diff(v; x; 2) = -\sin(x)$$

Diff(
$$\sin(x \cdot y)$$
;  $y$ ) =  $x \cdot \cos(x \cdot y)$ 

Maxima: higher order mixed partial y,x, Diff,tab,;

Diff 
$$\left( \text{Diff} \left( \sin \left( x \cdot y \right); y \right); x \right) = -x \cdot y \cdot \sin \left( x \cdot y \right) + \cos \left( x \cdot y \right) \right)$$

rem:

MaximaLog("all")

https://www.youtube.com/watch?v=iJL2nfJiMR8