**WXMaxima**

exprime w en fonction de z *use ' to suppress the evaluation*

x:subst(w,x); Dans l’expression x, substitute w par l’expression avec z

xt:xm-w/2;

z:w/(xmax-xmin+2\*ma)\*zoom;

xa:xt/z;

x:xa+xmax/2+xmin/2-offset;

w:solve('z=z,w)[1];

x:subst(w,x);

x:ratsimp(x);

x:expand(x);

**x = xmin/(2\*zoom)-xmax/(2\*zoom)-ma/zoom+xm/z+xmin/2+xmax/2-offset**

solve('x=x,xm)[1];

**xm = -((xmin+xmax-2\*x-2\*offset)\*z\*zoom+(xmin-xmax-2\*ma)\*z)/(2\*zoom)**

log10\_yt:ym-w/2;

zoomy:w/( log10\_ymax- log10\_ymin+2\* log10\_marginy)\*zoom;

log10\_ya:- log10\_yt/zoomy;

log10\_y: log10\_ya+ log10\_ymax/2+ log10\_ymin/2+offsety/mvoYF;

w:solve('zoomy=zoomy,w)[1];

log10\_y:subst(w, log10\_y);

log10\_y:ratsimp(log10\_y);

log10\_yp :expand(log10\_y);

log10\_p  = -ym/zoomy-log10\_ymin/(2\*zoom)+log10\_ymax/(2\*zoom)+log10\_marginy/zoom+offsety+log10\_ymin/2+log10\_ymax/2

v :expand(log10\_y);

p : exp(log10\_yp \* log(10))

**p = e(log(10)\*(-ym/zoomy-log10\_ymin/(2\*zoom)+log10\_ymax/(2\*zoom)+log10\_marginy/zoom+offsety/mvoYF+log10\_ymin/2+log10\_ymax/2))**

ym :solve('p=p,ym)[1];

expand(ym);

**ym=-(log10\_ymin\*zoomy)/(2\*zoom)+(log10\_ymax\*zoomy)/(2\*zoom)+(log10\_marginy\*zoomy)/zoom-(log(p)\*zoomy)/log(10)+**

**(offsety\*zoomy)/mvoYF+(log10\_ymin\*zoomy)/2+(log10\_ymax\*zoomy)/2**