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#ifndef __tool_box__
#define __tool_box__
#include <stdlib.h>
#include <stdio.h>
#include <string.h>
#include <
href../../../../common/math/cdo/cdo_math_h_src.pdfmath.h>
#include <assert.h>

#include "pnl/pnl_mathtools.h"
#include "pnl/pnl_vector.h"

typedef struct X_Grid
{
    double Bnd_Left;
    double Bnd_Right;
    double step;
    int N;
} X_Grid;

extern X_Grid *x_grid_create(double dBnd_Left, double dBnd_Right, int dN);
extern double x_grid_point(X_Grid *grid , int i);

// Math tools

extern void progonka(int N, const double low,  const double diag, const double u
                    const PnlVect *right_side, PnlVect *result);
extern void quadratic_interpolation(double Fm1, double F0, double Fp1, double Xm

// All these functions ara not yet tested
extern void polint(double *xa, double *ya, int n, double x, double *y, double *d
extern double trapzd(PnlFunc *func, void *params, double a, double b, int n, dou
extern double qromb(PnlFunc *func, void *params, double a, double b);

#endif
```

