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```

#if defined(PremiaCurrentVersion) && PremiaCurrentVersion <
    (2008+2) //The "#else" part of the code will be freely av
    ailable after the (year of creation of this file + 2)
#else

void matmat(double **a, int nra, int nca, double **b, int
    ncb, double **prod);
/*-----
-----
Postmultiplies the matrix a[0..nra-1][0..nca-1] by the
matrix
b[0..nca-1][0..ncb-1] and returns the product in the matr
ix
prod[0..nra-1][0..ncb-1].
-----
-----*/

void matvec(double **a, int nra, int nca, double *x,
    double *b);
/*-----
-----
Postmultiplies the matrix a[0..nra-1][0..nca-1] by the vec
tor
x[0..nca-1] and returns the product in the vector b[0..nra
-1].
-----
-----*/

void transpose(double **a, int nr, int nc, double **at);
/*-----
-----
Returns the transpose of a[0..nr-1][0..nc-1] as
at[0..nc-1][0..nr-1].
-----
-----*/

void vecmat(double *x, double **a, int nra, int nca,
    double *b);
/*-----
-----

```

```

Premultiplies the matrix a[0..nra-1][0..nca-1] by the vec
tor
x[0..nra-1] and returns the product in the vector b[0..nc
a-1].
-----
-----*/

double vecvec(double *first1, double *last1, double *first2
);
/*-----
-----
Returns the inner product between the vectors u[0..n-1] and
v[0..n-1].
-----
-----*/

//void pairwdiff(double* first1, double* last1, double* fir
st2, double* last2, double* dest);
void pairwdiff(int n, double *x, double *y, double **de
st);

/*-----
-----
Computes the pairwise differences between the elements in
[first1, last1) and the elements in [first2, last2) and pl
aces them
in dest. dest must be large enough to hold all of the m *
n
differences, where m = last1 - first1 and n = last2 - fir
st2.
-----
-----*/

#endif //PremiaCurrentVersion

```

## References