

NAME

lehmer - a symmetric positive definite N-by-N matrix

CALLING SEQUENCE

[A] = lehmer(n)

PARAMETERS

n : size of the matrix **A**

A : matrix

DESCRIPTION

Makes a symmetric positive definite N-by-N matrix with $A(i,j) = i/j$ for $j \geq i$. **A** is totally nonnegative. $\text{INV}(\mathbf{A})$ is tridiagonal, and explicit formulas are known for its entries. $N \leq \text{COND}(\mathbf{A}) \leq 4*N*N$.

EXAMPLE

n=10; [A] = lehmer(n)

AUTHOR

Adaptation by Aladin Group of the corresponding code of netlib/mltemplatesdev (Univ. of Tennessee and Oak Ridge National Laboratory) - 20 March 2001.

SEE ALSO**SEE ALSO**

makefish, matgen , wathen