1035-05-381   **Cristina M Ballantine*** (`cballant@holycross.edu`), Dept. of Mathematics and Computer Science, College of the Holy Cross, 1 College Street, Worcester, MA 01610, **Sharon M Frechette** (`sfrechet@mathcs.holycross.edu`), Dept. of Mathematics and Computer Science, College of the Holy Cross, 1 College Street, Worcester, MA 01610, and **John B Little** (`little@mathcs.holycross.edu`), Dept. of Mathematics and Computer Science, College of the Holy Cross, 1 College Street, Worcester, MA 01610. *Determinants associated to Zeta matrices of posets and their relation to graph theory.*

We consider the matrix $\mathbf{3}_P = Z_P + Z_P^t$, where the entries of Z_P are the values of the zeta function of the finite poset P. We give a graph theoretical interpretation of the determinant of $\mathbf{3}_P$ and establish a recursive formula for this determinant in the case in which P is a boolean algebra. (Received September 05, 2007)