Then in terms of the Riemann Zeta function,

$$-C_n = \frac{1}{n^s} + \frac{1}{n^{s+1}} + \frac{1}{n^{s+2}} + \cdots$$

or

$$C_n = \left\{\frac{1}{1^s} + \frac{1}{2^s} + \frac{1}{3^s} + \frac{1}{(n-1)^s}\right\} - \zeta(s) .$$

However, the zeta function can be analytically continued for $R_e(s) < 1$ and for negative integers it is given by [2]

$$\zeta(-2m) = 0, \qquad \zeta(1-2m) = (-1)^m B_m/(2m), \qquad m = 1, 2, 3, \cdots ,$$

$$\zeta(0) = -1/2 \qquad (B_m \text{ are the Bernoulli numbers}).$$

Now letting $s = -1$ above, gives the valid particular solution

$$C_n = (1 + 2 + 3 + \cdots + n - 1) - \zeta(-1) .$$

Since the constant $\zeta(-1)$ satisfies the homogeneous equation, it can be deleted.

REFERENCES

1. R. J. Weinshenk and V. E. Hoggatt, Jr., "On Solving $C_{n+2} = C_{n+1} + C_n + n^m$ by Expansions and Operators," Fibonacci Quarterly, Vol. 8, No. 1, 1970, pp. 39-48.
2. C. N. Watson, A Course in Modern Analysis, Cambridge University Press, Cambridge, 1946, pp. 267-268.

[Continued from page 162.]

ERRATA

Please make the following correction to "A New Greatest Common Divisor Property of the Binomial Coefficients," appearing on p. 579, Vol. 10, No. 6, Dec. 1972:

On page 584, last equation, for

$$\binom{n+n}{k+a} \qquad \text{read} \qquad \binom{n+a}{k+a}.$$

In "Some Combinatorial Identities of Bruckman," appearing on page 613 of the same issue, please make the following correction.

On the right-hand side of Eq. (12), p. 615, for

$$\frac{2k}{2k+1} \quad \text{read} \quad \frac{2^k}{2k+1} .$$