

Re: Recurrence relation, part 2

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From: martin cohen (mjcohen_at_acm.org)

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Alex wrote:

> I have managed to unite 2 sums into one and to derive the following
> results.

>

> $C_{nk} = \sum_{r=0}^{\min(n, k)} \frac{(n+k-r-1)!}{(n-r)!(k-r)!r!}$
> $(a_{11})^{n-r}(a_{22})^{k-r-1} (a_{12}a_{21} - a_{11}a_{22})^r$
> $(na_{22} + (k-r)a_{12})$

>

>

> I have managed to unite 2 sums into one and to derive the following
> results.

> $D_{nk} = \sum_{r=0}^{\min(n, k)} \frac{(n+k-r-1)!}{(n-r)!(k-r)!r!}$
> $(a_{11})^{n-r-1}(a_{22})^{k-r} (a_{12}a_{21} - a_{11}a_{22})^r$
> $ka_{11} + (n-r)a_{21}$

>

> I am still waiting for someone to give me a good and precise reference
> to a book or an article describing two-dimensional or
> multi-dimensional recurrence relation.

>

> Thanks,

>

> Alex

>

"Finite Difference Equations" by Levy and Lessman republished in 1992 by
Dover (original publication date was 1961) has a 20 page chapter on
two-variable difference equations.