

Re: summation help

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- *From:* William Elliot <marsh@xxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Mon, 11 Apr 2005 16:05:56 -0700
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On Mon, 11 Apr 2005, jimbo wrote:

> I currently have the following summation:
> the summation of $((N-L+1)(L-1))$ from $L = 2$ to N .
>
> I am trying to reduce this to some form something like:
> the summation of $(N*L-L^2)$ from $L=1$ to $N-1$...
>

$$\begin{aligned} & \text{sum}(j=1..n) (n - j + 1)(j - 1) \\ &= \text{sum}(j=1..n)(nj - j^2 + j - n + j - 1) \\ &= \text{sum}_j [(n+2)j - j^2 - (n+1)] \\ &= (n+2).\text{sum}_j j - \text{sum}_j j^2 - n(n+1) \end{aligned}$$

> Does anyone have any suggestions?
>
Find $\text{sum}_j j$ and $\text{sum}_j j^2$.

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◇ *From:* jimbo
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◇ *From:* jimbo
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