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$(k+1)^3 - k^3$

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$$\sum_{k=1}^{n} k^2 = \frac{n(n+1)(2n+1)}{6}$$

$$(k+1)^3 - k^3 = 3k^2 + 3k + 1$$

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$2^3$

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$$2^3 \quad - \quad 1^3$$

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$2^3 \quad - \quad 1^3 \quad = \quad 3 \times 1^2$

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$$\begin{array}{lllllll}
(k+1)^3 - k^3 = 3k^2 + 3k + 1 \\
2^3 & - & 1^3 & = & 3 \times 1^2 & + & 3 \times 1 & + & 1 \\
3^3
\end{array}$$

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$$\begin{array}{lclclcl} 2^3 & - & 1^3 & = & 3 \times 1^2 & + & 3 \times 1 & + & 1 \\ 3^3 & - & 2^3 & & & & & & \end{array}$$

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$$\begin{array}{llllllll}
\multicolumn{8}{l}{(k+1)^3 - k^3 = 3k^2 + 3k + 1} \\
2^3 & - & 1^3 & = & 3 \times 1^2 & + & 3 \times 1 & + \quad 1 \\
3^3 & - & 2^3 & = & 3 \times 2^2 & & &
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$$\begin{array}{cccccccccc} 2^3 & - & 1^3 & = & 3 \times 1^2 & + & 3 \times 1 & + & 1 \\ 3^3 & - & 2^3 & = & 3 \times 2^2 & + & 3 \times 2 & & \end{array}$$

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 & & \vdots & & & & & & \\
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 & & \vdots & & & & & & \\
n^3 & - & (n-1)^3 & & & & & &
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$$\sum_{k=1}^{n} k^2$$

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\end{array}$$

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 & & \vdots & & & & & & \\
n^3 & - & (n-1)^3 & = & 3 \times (n-1)^2 & + & 3 \times (n-1) & + & 1 \\
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2^3 & - & 1^3 & = & 3 \times 1^2 & + & 3 \times 1 & + & 1 \\
3^3 & - & 2^3 & = & 3 \times 2^2 & + & 3 \times 2 & + & 1 \\
 & & \vdots & & & & & & \\
n^3 & - & (n-1)^3 & = & 3 \times (n-1)^2 & + & 3 \times (n-1) & + & 1 \\
(n+1)^3 & - & n^3 & & & & & &
\end{array}$$

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2^3 & - & 1^3 & = & 3 \times 1^2 & + & 3 \times 1 & + & 1 \\
3^3 & - & 2^3 & = & 3 \times 2^2 & + & 3 \times 2 & + & 1 \\
 & & \vdots & & & & & & \\
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$$\begin{array}{llllllll}
2^3 & - & 1^3 & = & 3\times 1^2 & + & 3\times 1 & + \quad 1 \\
3^3 & - & 2^3 & = & 3\times 2^2 & + & 3\times 2 & + \quad 1 \\
 & & \vdots & & & & & \\
n^3 & - & (n-1)^3 & = & 3\times (n-1)^2 & + & 3\times (n-1) & + \quad 1 \\
(n+1)^3 & - & n^3 & = & 3\times n^2 & + & 3\times n & 
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$$\begin{array}{lclcllclcl}
2^3 & - & 1^3 & = & 3 \times 1^2 & + & 3 \times 1 & + & 1 \\
3^3 & - & 2^3 & = & 3 \times 2^2 & + & 3 \times 2 & + & 1 \\
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2^3 & - & 1^3 & = & 3 \times 1^2 & + & 3 \times 1 & + & 1 \\
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$$(n+1)^3$$

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 & & & & & & & & \\
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(n+1)^3 & - & n^3 & = & 3 \times n^2 & + & 3 \times n & + & 1 \\
 & & & & & & & & \\
(n+1)^3 & - & 1^3 & = & 3 & & & &
\end{array}$$

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(n+1)^3 & - & n^3 & = & 3 \times n^2 & + & 3 \times n & + & 1 \\
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 & & \vdots & & & & & & \\
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3^3 & - & 2^3 & = & 3 \times 2^2 & + & 3 \times 2 & + & 1 \\
 & & \vdots & & & & & & \\
n^3 & - & (n-1)^3 & = & 3 \times (n-1)^2 & + & 3 \times (n-1) & + & 1 \\
(n+1)^3 & - & n^3 & = & 3 \times n^2 & + & 3 \times n & + & 1 \\
(n+1)^3 & - & 1^3 & = & 3 \times \sum_{k=1}^{n} k^2 & + & 3 \times \sum_{k=1}^{n} k & + & n \\
 & & & & & & & & \\
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3^3 & - & 2^3 & = & 3 \times 2^2 & + & 3 \times 2 & + & 1 \\
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(n+1)^3 & - & 1^3 & = & 3 \times \sum_{k=1}^{n} k^2 & + & 3 \times \sum_{k=1}^{n} k & + & n \\
(n+1)^3 & - & 1^3 & = & 3 & & & &
\end{array}$$

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(n+1)^3 & - & 1^3 & = & 3 \times \sum_{k=1}^{n} k^2 & + & 3 \times \frac{n(n+1)}{2} & &
\end{array}$$

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3^3 & - & 2^3 & = & 3\times 2^2 & + & 3\times 2 & + & 1 \\
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(n+1)^3 & - & n^3 & = & 3\times n^2 & + & 3\times n & + & 1 \\
(n+1)^3 & - & 1^3 & = & 3\times \sum_{k=1}^{n} k^2 & + & 3\times \sum_{k=1}^{n} k & + & n \\
(n+1)^3 & - & 1^3 & = & 3\times \sum_{k=1}^{n} k^2 & + & 3\times \frac{n(n+1)}{2} & + & n
\end{array}$$

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3^3 & - & 2^3 & = & 3 \times 2^2 & + & 3 \times 2 & + & 1 \\
 & & \vdots & & & & & & \\
n^3 & - & (n-1)^3 & = & 3 \times (n-1)^2 & + & 3 \times (n-1) & + & 1 \\
(n+1)^3 & - & n^3 & = & 3 \times n^2 & + & 3 \times n & + & 1 \\
(n+1)^3 & - & 1^3 & = & 3 \times \sum_{k=1}^{n} k^2 & + & 3 \times \sum_{k=1}^{n} k & + & n \\
(n+1)^3 & - & 1^3 & = & 3 \times \sum_{k=1}^{n} k^2 & + & 3 \times \frac{n(n+1)}{2} & + & n
\end{array}$$

Github:
https://min7014.github.io/math20200718001.html

Click or paste URL into the URL search bar, and you can see a picture moving.