Ouf !

1) On a $\sum_{k=1}^{n} \sum_{j=k}^{n} \frac{1}{j} = \sum_{j=1}^{n} \sum_{k=1}^{j} \frac{1}{j}$

$= \sum_{j=1}^{n} \frac{1}{j} (j)$ ✓

$= \sum_{j=1}^{n} 1$ Oui

$= n$

alors $\sum_{k=1}^{n} \sum_{j=1}^{k} \frac{1}{j} = n$ Bien

2) On a $\sum_{k=0}^{n} \left(u_k - u_{k+1} - u_{k+1} + u_{k+2} \right)$

$= \sum_{k=0}^{n} \left[-(u_{k+1} - u_k) + u_{k+2} - u_{k+1} \right]$

$= \sum_{k=0}^{n} -(u_{k+1} - u_k) + \sum_{k=0}^{n} (u_{k+2} - u_{k+1})$ ✓

$= -\sum_{k=0}^{n} (u_{k+1} - u_k) + \sum_{k=0}^{n} (u_{k+2} - u_{k+1})$

$= -u_{n+1} + u_0 + u_{n+2} - u_1$ Très bien !