$$= -\frac{1}{2}$$

不能拆成无限项极限

(9)、$\lim_{n\to\infty}\sum_{k=n}^{2n}\frac{1}{k^2} = \lim_{n\to\infty}\frac{1}{n^2} + \lim_{n\to\infty}\frac{1}{(n+1)^2} + \cdots + \lim_{n\to\infty}\frac{1}{(2n)^2} = 0$

6. $\lim_{n\to\infty}(x_n - y_n) = \lim_{n\to\infty} x_n - \lim_{n\to\infty} y_n = 0$

$\therefore \lim_{n\to\infty} x_n = \lim_{n\to\infty} y_n$. 需先证明极限存在.

$\because \lim_{n\to\infty}(x_n - y_n) = 0 \quad \therefore |x_n - y_n| < \varepsilon$

$\therefore y_n - x_n < \varepsilon$

$\because x_n \leq A$

$\therefore y_n - A < y_n - x_n < \varepsilon$

$\therefore \forall \varepsilon,\ \exists N \in N$, s.t. $n > N$ 有 $|y_n - A| < \varepsilon$. 即 $\lim_{n\to\infty} y_n = A$

$\therefore \lim_{n\to\infty} x_n = \lim_{n\to\infty} = A$