$\Sigma \tan^{-1}\left(\frac{1}{n^2+n+1}\right)$

take $v_n = \frac{1}{n^2+n+1}$

$\lim\limits_{n\to\infty} \frac{u_n}{v_n} = \lim\limits_{n\to\infty} \frac{\tan^{-1}\left(\frac{1}{n^2+n+1}\right)}{\left(\frac{1}{n^2+n+1}\right)} = 1$

Σu_n & Σv_n behaves alike.

$\Sigma v_n = \Sigma \frac{1}{n^2+n+1}$

$\downarrow$

$w_n = \frac{1}{n^2}$

$\lim\limits_{n\to\infty} \frac{v_n}{w_n} = \lim\limits_{n\to\infty} \frac{\left(\frac{1}{n^2+n+1}\right)}{1/n^2} = 1$

$\Sigma u_n \Leftrightarrow \Sigma v_n \Leftrightarrow \Sigma w_n$

$\Rightarrow$ Σw_n is cgt. $\Rightarrow$ Σv_n is cgt. $\Rightarrow$ Σu_n is cgt.

$$\Sigma \tan^{-1}\left(\frac{1}{n^2+n+1}\right)$$

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Σu_n & Σv_n behaves alike.

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