$$\sum_{n=1}^{\infty} \frac{z^n}{(1+i)^n} = \sum_{n=1}^{\infty} \frac{x^n \cdot (\cos(n\varphi) + i\sin(n\varphi))}{(\sqrt{2})^n \cdot (\cos n\frac{\pi}{4} + i\sin n\frac{\pi}{4})}$$

$z^n = x \cdot (\cos\varphi + i\sin\varphi)$, $x \in R$

Ak $|z| = \sqrt{2}$, tak $\left|\frac{z^n}{(1+i)^n}\right| = \frac{|z^n|}{|(1+i)|^n} = \left(\frac{|z|}{|(1+i)|}\right)^n = \left(\frac{\sqrt{2}}{\sqrt{2}}\right)^n = 1$ pre $\forall n$

Nie je splnená nutná podmienka konvergencie, takže rad <u>nekonverguje</u> pre žiadne z také, že $|z| = \sqrt{2}$.