

(41)

$$(4) \quad u_n = \frac{\cos(n)}{n^2}$$

$$|u_n| \leq \frac{1}{n^2}$$

Comparison + Riemann  $\sum |u_n| CV$

$$CVA = \sum u_n CV$$

$$(5) \quad u_n = \frac{1 + (-1)^n \sqrt{n}}{1+n}$$

$$\sum u_n = \sum \frac{1}{1+n} + \sum (-1)^n \frac{\sqrt{n}}{n+1}$$

Leibniz =  $\sum (-1)^n \frac{\sqrt{n}}{n+1} CV$

Riemann  $\sum \frac{1}{1+n} DV$

donc  $\sum u_n = \underbrace{\sum \frac{1}{n+1}}_{DV} + \underbrace{\sum \frac{(-1)^n \sqrt{n}}{n+1}}_{CV}$  est  $\sum$  d'une CV et DV

donc  $\sum u_n DV$