







$$\lim_{h \rightarrow +\infty} \frac{h \sqrt[n]{\ln(h)}}{h^n}$$

$$\lim_{h \rightarrow +\infty} \frac{h \sqrt[n]{\ln(h)}}{\sqrt[n]{h^n}}$$

$$\lim_{h \rightarrow +\infty} \frac{\ln(h)}{h^2} = 0 < 1$$

(converge)

$$8) \sum_{h=1}^{\infty} \frac{(-3h)^h}{(5h-1)^h}$$

$$\lim_{h \rightarrow +\infty} \sqrt[h]{\frac{(-3h)^h}{(5h-1)^h}} \rightarrow \sqrt[h]{|a_h|} \quad \text{valor absoluto}$$

$$\lim_{h \rightarrow +\infty} \frac{\sqrt[h]{(-3h)^h}}{\sqrt[h]{(5h-1)^h}}$$

$$\lim_{h \rightarrow +\infty} \frac{3h}{5h-1}$$

$$\lim_{h \rightarrow +\infty} \frac{3h}{h(5 - \frac{1}{h})}$$

$$\lim_{h \rightarrow +\infty} \frac{3}{5 - \frac{1}{h} = 0} = \frac{3}{5} < 1$$

(converge)

$$9) \sum_{h=1}^{\infty} \frac{h^5 (h^3 + 2)^{h+1}}{(2h+1)^{3h}}$$



