

$$\frac{2^{2n-1}5-1}{4^n-3} \rightsquigarrow \frac{5}{2}; \quad \frac{3^{n+1}+4^n}{2^n+4^{n+2}} \rightsquigarrow \frac{1}{16}; \quad \left(\frac{5}{4}\right)^n \frac{4^{n+1}+1}{5^{n+1}-1} \rightsquigarrow \frac{4}{5}; \quad \frac{2^{2n}+3}{4^{n-1}+1} \rightsquigarrow 4$$

$$\frac{(-1/2)^n}{3n-8} \rightsquigarrow 0$$

$$\frac{4^n+1}{5^n} n_{\mathbf{a}} \rightsquigarrow 0; \quad \frac{n^2}{n^3+2n+1} n!_{\mathbf{c}} + \frac{3^n}{4^n} n_{\mathbf{f}} \rightsquigarrow 0$$

$$(n+2n^2)^{2n^2-1} \rightsquigarrow +\infty$$

$$(n^2+3)^{\frac{n^2-3}{n^2+5}} \not\rightsquigarrow -\infty$$

$$(9^n+10^n+11^n)^{1/n} \rightsquigarrow 11; \quad (3^n+4^n+5^n)^{1/n} \rightsquigarrow 5; \quad (2^n+3^n+100^n)^{1/n} \rightsquigarrow 100; \quad (2^n+3^n)^{-1/n} \rightsquigarrow \frac{1}{3}$$

$$: \quad (1+2^n+2^{-n})^{1/n} \rightsquigarrow 2; \quad \left(\frac{4^n+2}{7^n+1}\right)^{1/n} \rightsquigarrow \frac{4}{7}$$

$$\frac{2^n 3^{2n}}{n!} \rightsquigarrow 0; \quad \frac{n!}{n^n} \rightsquigarrow 0; \quad \frac{n! 2^n}{n^n} \rightsquigarrow 0; \quad \frac{(n!)^2}{(2n)!} \rightsquigarrow 0$$

$$(3^n+5^n)^{1/n} + \frac{2^n 3^{2n}}{n!} \rightsquigarrow 5; \quad \frac{3^n 6^n}{n!} n!_{\mathbf{f}} \rightsquigarrow 0$$

$$\frac{1+\sqrt{2}+\sqrt{3}+\dots+\sqrt{n}}{n^2} \rightsquigarrow 0$$

$$\frac{2^n+3^n+6^n}{n} \not\rightsquigarrow 6 \not\rightsquigarrow; \quad \frac{2^n+3^n+6^n}{n} + \frac{n!_{\mathbf{a}}}{n^2} \rightsquigarrow 6 \not\rightsquigarrow$$

$$(n^2-1)^{1/(n-1)}_{\mathbf{f}} \rightsquigarrow +\infty$$

$$\frac{1/n_{\mathbf{f}}_{\mathbf{e}}}{n} \rightsquigarrow 0; \quad \frac{n_{\mathbf{c}}}{n^{21/n}_{\mathbf{f}}} \rightsquigarrow 0$$

$$1/n_{\mathbf{f}}/n \not\rightsquigarrow -\infty$$

$$\frac{1/n_{\mathbf{f}}^2}{1/\sqrt{n}_{\mathbf{a}}} \rightsquigarrow 0$$

$$\left(\frac{1}{3} + \frac{4}{5}\right) n_{\mathbf{a}} \rightsquigarrow 0; \quad \left(\frac{2}{3} + \frac{3}{5} + \frac{1}{2}\right) 2n_{\mathbf{f}} \rightsquigarrow 0; \quad \left(\frac{1}{2} + \frac{2}{3} + \frac{11}{12}\right) n!_{\mathbf{c}} \rightsquigarrow 0$$

$$\frac{1+2+\dots+n}{n^2} (5^n+6^n+7^n)^{1/n} \rightsquigarrow \frac{7}{2}$$

$$\sqrt{\sqrt{9n^2 + 2n} - 3n} \mathbf{a} \rightsquigarrow 1/\sqrt{3} \mathbf{a}$$

$$6 - \sqrt{5 \cdot 5^{1/2} 5^{1/4} 5^{1/8} \dots 5^{1/2^n}} \mathbf{a} \rightsquigarrow \frac{\pi}{4}$$

$$(n^3 + n^2 + 1)^{-1/3} - (n^3 - n^2 + 1)^{1/3} \rightsquigarrow -\infty$$