

RELACIÓN 1: CÁLCULO DIFERENCIAL LÍMITES DE SUCESIONES

$$1. \lim_{n \rightarrow \infty} \frac{6n^2 + 4n - 6}{3n^2 - 6n + 7}$$

$$2. \lim_{n \rightarrow \infty} \frac{\sqrt{n^2 + 5n - 1}}{\sqrt{2n^3 + 3n^2 + 2}}$$

$$3. \lim_{n \rightarrow \infty} \left(\frac{2n + 6}{3n - 5} \right)^n$$

$$4. \lim_{n \rightarrow \infty} \left(\sqrt{\frac{8n^2 - 2n}{2n^2 - 3}} \cdot \sqrt{\frac{(n+1)^2}{n^2 - 3n + 5}} \right)$$

$$5. \lim_{n \rightarrow \infty} \left[(2n + 4)^{-1} \cdot \sqrt{n^2 - 3} \right]$$

$$6. \lim_{n \rightarrow \infty} \left(\frac{n^2 + 2}{n + 1} - \frac{3n - 1}{3} \right)$$

$$7. \lim_{n \rightarrow \infty} (\sqrt{n^2} - \sqrt{n^2 + n})$$

$$8. \lim_{n \rightarrow \infty} \left[n \cdot (n + 1) - \frac{1}{(\sqrt{n})^{-1}} \right]$$

$$9. \lim_{n \rightarrow \infty} \frac{2 + \frac{5}{n}}{4 - \frac{3}{n^2}}$$

$$10. \lim_{n \rightarrow \infty} \left(\frac{n^2 - 3n + 1}{n^2 + n - 1} \right)^{2n}$$

$$11. \lim_{n \rightarrow \infty} \left(\frac{2n}{2n + 1} \right)^{n+1}$$

$$12. \lim_{n \rightarrow \infty} \frac{\sqrt{n^2 + 4} - n}{2n - 1}$$

$$13. \lim_{n \rightarrow \infty} \sqrt[3]{\frac{-8n^4 - 5n + 1}{n^4 + 6n^2 + 3}}$$

$$14. \lim_{n \rightarrow \infty} \frac{1 + 4 + 7 + \dots + (3n - 2)}{5n^2 + 6}$$

$$15. \lim_{n \rightarrow \infty} \left[(n + 1) \cdot \left(\frac{n^3 + 3}{n^3} - \frac{2n^2 + 2}{2n^2} \right) \right]$$

$$16. \lim_{n \rightarrow \infty} \left(1 - \frac{2}{n} \right)^{\frac{1}{n} - 2}$$

$$17. \lim_{n \rightarrow \infty} \left[\left(4^{\frac{1}{n}} \right)^{2n} + \sqrt{3 + \frac{1}{n}} \right]$$

$$18. \lim_{n \rightarrow \infty} \left(\frac{2n + 5}{n + 4} \right)^{\frac{n}{2}}$$

$$19. \lim_{n \rightarrow \infty} \frac{4n - 6}{2n^2 + 7n + 1}$$

$$20. \lim_{n \rightarrow \infty} \frac{1 + 3 + 5 + \dots + (2n - 1)}{3n^2}$$

$$21. \lim_{n \rightarrow \infty} \left(\frac{3n - 5}{2n + 6} \right)^n$$

$$22. \lim_{n \rightarrow \infty} \frac{\frac{1}{n} + \frac{4}{n}}{\frac{n}{6}}$$

$$23. \lim_{n \rightarrow \infty} \frac{\frac{n-1}{n} - \frac{n}{n+1}}{\frac{n^2}{n^2+1} - \frac{2n}{2n+1}}$$

$$24. \lim_{n \rightarrow \infty} (\sqrt{n^2 + 1} - n)$$

$$25. \lim_{n \rightarrow \infty} (n^3 - 3n^2 + n - 200)$$

$$26. \lim_{n \rightarrow -\infty} \left(\frac{1 - 3n}{4 - 3n} \right)^{n-2}$$