

DOMINIO DE UNA FUNCIÓN. CÁLCULO ALGEBRAICO.

RESUMEN

| Expresión | No existe cuando: | Existe cuando: |
|----------------------|-------------------|-----------------------------|
| a/b | $b = 0$ | $b \neq 0$ |
| \sqrt{b} | $b < 0$ | $b \geq 0$ |
| $\sqrt[3]{b}$ | | $\forall b \in \mathcal{R}$ |
| $\log a$ | $a \leq 0$ | $a > 0$ |
| $\frac{a}{\sqrt{b}}$ | $b \leq 0$ | $b > 0$ |

Determina el dominio de las siguientes funciones:

| | | | | |
|------------|--|------------|---------------------------------------|-------------|
| 001 | $A(x) = 3x^2 - 5x + 2$ | 002 | $B(x) = -3x^2 - 8x - 2$ | 4E 1B/2B |
| 003 | $C(x) = x^2 + x + 2$ | 004 | $D(x) = x^3 - 3x + 2$ | 4E 1B/2B |
| 005 | $E(x) = \frac{1}{x-3}$ | 006 | $F(x) = \frac{3}{(x+2)(x-1)}$ | 4E 1B/2B |
| 007 | $G(x) = \frac{1}{(x-3)(x+2)}$ | 008 | $H(x) = \frac{3x}{x^2 - 3x + 2}$ | 4E 1B/2B |
| 009 | $G(x) = \frac{1}{3x^2 - 5x - 8}$ | 010 | $G(x) = \frac{1}{2x^2 - 5x - 8}$ | 4E 1B/2B |
| 011 | $H(x) = \frac{3x}{2x^2 + 2x + 2}$ | 012 | $I(x) = \frac{2x+1}{x-3}$ | 4E 1B/2B |
| 013 | $J(x) = \frac{3x}{x^2 - 4}$ | 014 | $K(x) = \sqrt{x-8}$ | 4E 1B/2B |
| 015 | $L(x) = \sqrt{(x-3)(x+4)}$ | 016 | $M(x) = \sqrt{(x-2)(x+1)}$ | 4E 1B/2B |
| 017 | $N(x) = \sqrt{4-x^2}$ | 018 | $\tilde{N}(x) = \sqrt{x^2 - 5x + 4}$ | 4E 1B/2B |
| 019 | $P(x) = \sqrt{x^2 - x - 2}$ | 020 | $P(x) = \sqrt{x^2 - 5x + 4}$ | 4E 1B/2B |
| 021 | $O(x) = \sqrt{-x^2 - 6x - 9}$ | 022 | $O(x) = \sqrt{-3x^2 + 11x + 4}$ | 4E 1B/2B |
| 023 | $R(x) = \sqrt{\frac{x+3}{x-1}}$ | 024 | $Q(x) = \sqrt{\frac{-x+4}{2x-3}}$ | 4E 1B/2B |
| 025 | $U(x) = \sqrt{\frac{2-x}{2+x}}$ | 026 | $V(x) = \sqrt{\frac{x-2}{x-4}}$ | 4E 1B/2B |
| 027 | $S(x) = \sqrt{\frac{4x-1}{x-1}}$ | 028 | $T(x) = \sqrt{\frac{4x+4}{7-x}}$ | 4E 1B/2B |
| 029 | $X(x) = \sqrt{\frac{2x-1}{2x}}$ | 030 | $W(x) = \sqrt{\frac{(x-1)(x+2)}{-3}}$ | 4E 1B/2B |
| 031 | $B(x) = \sqrt{\frac{-6}{2x^2 + 4x - 6}}$ | 032 | $W(x) = \sqrt{\frac{(x+1)(x+3)}{-2}}$ | 4E 1B/2B |
| 033 | $Y(x) = \sqrt{x^3 - 3x^2 - 6x + 8}$ | 034 | $Y(x) = \sqrt{x^3 - 3x^2 + 5x - 3}$ | 4E 1B/2B |
| 035 | $Y(x) = \sqrt{2x^3 + 8x^2 - 6x - 4}$ | 036 | $Z(x) = \sqrt{\frac{x^2 - 1}{x + 3}}$ | 4E 1B/2B |



| | | | | |
|------------|--|------------|------------------------------------|-------------|
| 037 | $A(x) = \sqrt{x^2 - 4} + \sqrt{4 - x^2}$ | 038 | $A(x) = \frac{2x}{\sqrt[4]{5x-3}}$ | 4E 1B/2B |
| 039 | $A(x) = \frac{7x^2 + 1}{\sqrt{3x-2}}$ | | | 4E 1B/2B |
| 040 | Calcula el dominio de $A(x) = \begin{cases} 0 & \text{si } x < 1 \\ 2 & \text{si } x > 3 \end{cases}$ y realiza un esbozo. | | | 4E 1B/2B |
| 041 | Calcula el dominio de $A(x) = \begin{cases} 2x-1 & \text{si } x \leq 0 \\ 3x & \text{si } x > 1 \end{cases}$ y realiza un esbozo. | | | 4E 1B/2B |
| 042 | Calcula el dominio de $A(x) = \begin{cases} \frac{1}{x-2} & \text{si } x > 0 \\ 2 & \text{si } x < 0 \end{cases}$ y realiza un esbozo. | | | 4E 1B/2B |
| 043 | Calcula el dominio de $A(x) = \begin{cases} \frac{4x}{x+5} & \text{si } x \leq 0 \\ \frac{1}{x+1} & \text{si } 0 < x < 3 \\ \sqrt{x-6} & \text{si } x \geq 3 \end{cases}$ y realiza un esbozo. | | | 4E 1B/2B |
| 044 | Calcula el dominio de $A(x) = \begin{cases} \frac{1}{x+1} & \text{si } x < 3 \\ \frac{1}{3} & \text{si } 3 < x < 4 \\ \frac{1}{x-5} & \text{si } x \geq 5 \end{cases}$ y realiza un esbozo. | | | 4E 1B/2B |
| 045 | Calcula el dominio de $A(x) = \begin{cases} \sqrt{\frac{x-1}{x-2}} & \text{si } x < -2 \\ \frac{2}{x+3} & \text{si } -2 < x \leq 2 \\ \frac{x+1}{\sqrt{2x}} & \text{si } x > 2 \end{cases}$ y realiza un esbozo. | | | 4E 1B/2B |
| 046 | $A(x) = \frac{1}{x^2 + 1}$ | 047 | $K(x) = \frac{x+1}{\sqrt{x}}$ | 4E 1B/2B |
| 048 | $A(x) = \frac{1}{(x-1)^2}$ | 049 | $K(x) = \frac{1}{\sqrt{x-2}}$ | 4E 1B/2B |