

FUNCIONES

Ejercicio 1.- Calcular el dominio de las siguientes funciones:

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| a. $f(x) = 9 - 4x^2$ | $Dom f = R$ |
| b. $g(x) = \frac{x}{7 - x^2}$ | $Dom g = R - \{\sqrt{7}, -\sqrt{7}\}$ |
| c. $h(x) = \frac{x-1}{x^3 - 2x^2 - 5x + 6}$ | $Dom h = R - \{-2, 1, 3\}$ |
| d. $y = 1 + \frac{1}{x} - \frac{x}{x-1}$ | $Dom y = R - \{0, 1\}$ |
| e. $f(x) = \sqrt[5]{\frac{x}{7-x^2}}$ | $Dom f = R - \{\sqrt{7}, -\sqrt{7}\}$ |
| f. $f(x) = x - \frac{2}{\sqrt{x}}$ | $Dom f = (0, +\infty)$ |
| g. $y = \sqrt{x^2 - 5x + 6}$ | $Dom y = (-\infty, 2] \cup [3, +\infty)$ |
| h. $y = \frac{-2}{\sqrt{x^2 - 5x + 6}}$ | $Dom y = (-\infty, 2) \cup (3, +\infty)$ |
| i. $y = \frac{-2}{\sqrt[3]{x^2 - 5x + 6}}$ | $Dom y = R - \{2, 3\}$ |
| j. $f(x) = \sqrt{\frac{x+2}{3x-5}}$ | $Dom f = (-\infty, -2] \cup \left(\frac{5}{3}, +\infty\right)$ |

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| k. $g(x) = \sqrt[4]{x^2 + 5x + 8}$ | $Dom g = R$ |
| l. $l(x) = \sqrt{3 + 2x - x^2}$ | $Dom l = [-1, 3]$ |
| m. $m(x) = \frac{\sqrt{9-x^2}}{x+1}$ | $Dom m = [-3, 3] - \{-1\}$ |
| n. $y = e^{\frac{1}{x}} + 2^{-\frac{1}{x-7}}$ | $Dom y = R - \{0, 7\}$ |
| ñ. $\tilde{n}(x) = \ln(2x + 3)$ | $Dom \tilde{n} = \left(-\frac{3}{2}, +\infty\right)$ |
| o. $k(x) = \ln(2x + 3) + \frac{1}{x}$ | $Dom k = \left(-\frac{3}{2}, +\infty\right) - \{0\}$ |
| p. $f(x) = \text{sen}\sqrt{1-x^2}$ | $Dom f = [-1, 1]$ |
| q. $f(x) = x^2 - 3x + \ln 5^{\cos x}$ | $Dom f = R$ |
| r. $h(x) = \frac{\log(25-x^2)}{\sqrt{x^2+3x-4}}$ | $Dom h = (-5, -4) \cup (1, 5)$ |
| s. $y = \text{tg}(2x - 3)$ | $Dom f = R - \left\{\frac{3}{2} + (2k+1)\frac{\pi}{4} \text{ con } k \in Z\right\}$ |