

FUNCIONES

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

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. $y = \frac{-2}{\sqrt[7]{x^2 - 5x + 6}}$	$Dom\ y = R - \{2, 3\}$
j. $f(x) = \sqrt{\frac{x+2}{3x-5}}$	$Dom\ f = (-\infty, -2] \cup \left(\frac{5}{3}, +\infty\right)$

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. $f(x) = \operatorname{sen}\sqrt{1 - x^2}$	$Dom\ f = [-1, 1]$
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. $y = \operatorname{tg}(2x - 3)$	$Dom\ f = R - \left\{\frac{3}{2} + (2k + 1)\frac{\pi}{4} \mid k \in Z\right\}$