# FUNCIONES

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

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

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