

FUNCIONES DIVERSAS

1) Identificar las siguientes funciones, graficar e indicar dominio y recorrido.

1) $y = 2x - 3$

2) $y = \sqrt{x+3}$

3) $y = \frac{x+2}{x-1}$

4) $y = \frac{3}{2x-2}$

5) $y = x^2 - 2$

6) $y = x + 3$

7) $y = 2^{x-2}$

8) $y = 2^{x+1} - 1$

9) $y = 4 - 2x$

10) $y = 15 - 2x - x^2$

11) $y = \frac{(x+2)(x^2-1)}{x+1}$

12) $y = -2$

13) $y = \log_3(x-1)$

14) $y = |2-x|$

15) $y = \frac{x^2 + 4x + 4}{x^2 - 4}$

16) $y = \left(\frac{1}{2}\right)^{x+1}$

17) $y = |x| - 4$

18) $y = \frac{1}{2}$

19) $y = 3^x$

20) $y = |x-5| + 2$

21) $y = \frac{x-4}{x}$

22) $y = -x^2 + 4$

23) $y = \log_{1/2}(x)$

24) $y = \sqrt{x-2}$

25) $y = \left(\frac{1}{2}\right)^x + 1$

26) $y = \log_{1/3}(x+2)$

27) $y = \sqrt{x} - 4$

28) $y = \frac{-2x}{1+x}$

29) $y = \sqrt{x+1} - 3$

30) $y = \sqrt{x-3} + 2$

31) $y = -\sqrt{x+1}$

32) $y = 3$

33) $y = \log_3(x)$

34) $y = \frac{x^2 + 5x + 6}{x+2}$

35) $y = \left(\frac{1}{3}\right)^x - 2$

36) $y = \lfloor x \rfloor - 2$

37) $y = x^2 - 9$

38) $y = x^2 + 8x + 12$

39) $y = x^2 + 3$

$$40) f(x) = \begin{cases} 2x+3 & ; \quad -4 \leq x \leq -1 \\ 1-x^2 & ; \quad -1 < x < 1 \\ 2 & ; \quad x \geq 2 \end{cases}$$

$$41) f(x) = \begin{cases} x+2 & ; \quad -3 \leq x \leq -1 \\ 1 & ; \quad -1 < x < 1 \\ 2-x & ; \quad 1 < x < 3 \end{cases}$$

$$42) f(x) = \begin{cases} 2 - \lfloor x \rfloor & ; -1 \leq x \leq 3 \\ \lfloor x \rfloor + 1 & ; 3 < x < 5 \\ -2 & ; 5 \leq x < 7 \end{cases}$$

$$49) f(x) = \begin{cases} \log_2(x) & ; 0 < x < 4 \\ |-x| & ; -2 \leq x < 0 \\ \frac{x}{2} & ; -6 < x < -2 ; x \neq 3 \end{cases}$$

$$43) f(x) = \begin{cases} \frac{3-x}{x+3} & ; -4 \leq x \leq -1 \\ \frac{2x}{x-2} & ; -1 < x < 2 \\ 0 & ; x \geq 2 \end{cases}$$

$$50) f(x) = \begin{cases} 1-x^2 & ; -1 \leq x \leq 3 \\ 2x+1 & ; 3 < x < 5 \\ -2 & ; 5 \leq x < 7 \end{cases}$$

$$44) f(x) = \begin{cases} \sqrt{x+6} + 2 & ; -6 \leq x < -2 \\ 5-3x & ; -2 \leq x < 1 \\ \frac{2x-1}{x-4} & ; 2 < x \leq 7 ; x \neq 4 \end{cases}$$

$$51) f(x) = \begin{cases} 2x & ; -4 \leq x \leq -1 \\ 2x^2 & ; -1 < x < 2 \\ -1 & ; x \geq 2 \end{cases}$$

$$45) f(x) = \begin{cases} -1 & ; -7 \leq x < -3 \\ 2x^2 & ; -2 \leq x < 1 \\ \frac{1-x}{x-3} & ; 1 < x \leq 7 ; x \neq 3 \end{cases}$$

$$52) f(x) = \begin{cases} x+2 & ; -6 \leq x < -2 \\ 5-3x & ; -2 \leq x < 1 \\ x^2+1 & ; 2 < x \leq 7 \end{cases}$$

$$46) f(x) = \begin{cases} -4 & ; x \leq -3 \\ 2x^2 & ; -3 < x < 0 \\ \sqrt{x} & ; x \geq 0 \end{cases}$$

$$53) f(x) = \begin{cases} -1 & ; -7 \leq x < -3 \\ \frac{x^2}{2} & ; -2 \leq x < 1 \\ 2-3x & ; 1 < x \leq 7 \end{cases}$$

$$47) f(x) = \begin{cases} \left(\frac{1}{2}\right)^{x+2} & ; -5 \leq x \leq 1 \\ \log_2(x-1) & ; 1 < x \leq 5 \end{cases}$$

$$54) f(x) = \begin{cases} -4 & ; x \leq -4 \\ x^2+x+1 & ; -4 < x < -1 \\ -x^2+1 & ; x \geq -1 \end{cases}$$

$$48) f(x) = \begin{cases} \frac{x^2}{2} & ; -2 < x \leq 0 \\ 3x & ; 0 < x < 2 \\ 8 & ; x \geq 2 \end{cases}$$

$$f(x) = \begin{cases} \frac{x^2-4}{2} & ; -2 < x \leq 0 \\ 5-3x & ; 0 < x < 2 \\ 8 & ; x \geq 2 \end{cases}$$

