

## Problemas de representaciones gráficas

### 2º de Bachillerato

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Representar gráficamente las siguientes funciones:

1.

$$f(x) = x^3 - 3x^2 + 3$$

2.

$$f(x) = -\frac{1}{3}(x^3 - 3x + 2)$$

3.

$$f(x) = 2 - x - x^3$$

4.

$$f(x) = x^3 + 3x^2 + 3x + 2$$

5.

$$f(x) = 3x^2 - 9x + 1$$

6.

$$f(x) = (x + 1)(x - 2)(x - 5)$$

7.

$$f(x) = -x^3 + 3x^2 + 9x - 2$$

8.

$$f(x) = \frac{1}{3}(x - 1)^3 + 2$$

9.

$$f(x) = 3x^4 + 4x^3$$

10.

$$f(x) = 3x^4 - 6x^2$$

11.

$$f(x) = x^4 - 4x^3 + 16x$$

12.

$$f(x) = x^4 - 8x^3 + 18x^2 - 16x + 5$$

13.

$$f(x) = x^4 - 4x^3 + 16x - 16$$

14.

$$f(x) = x^5 + 1$$

15.

$$f(x) = x^5 - 5x$$

16.

$$f(x) = (x - 1)^5$$

17.

$$f(x) = |2x - 3|$$

18.

$$f(x) = |x^2 - 6x + 5|$$

19.

$$f(x) = \frac{x^2}{x^2 + 3}$$

20.

$$f(x) = \frac{x}{x^2 + 1}$$

21.

$$f(x) = 3x^{2/3} - 2x$$

22.

$$f(x) = 3x^{2/3} - x^2$$

23.

$$f(x) = \frac{x}{\sqrt{x^2 + 7}}$$

24.

$$f(x) = \frac{4x}{\sqrt{x^2 + 15}}$$

25.

$$f(x) = \sin x - \frac{1}{18} \sin 3x \quad 0 \leq x \leq 2\pi$$

26.

$$f(x) = \cos x - \frac{1}{2} \cos 2x \quad 0 \leq x \leq 2\pi$$

27.

$$f(x) = 2x - \tan x \quad -\frac{\pi}{2} < x < \frac{\pi}{2}$$

28.

$$f(x) = 2x + \cot x \quad 0 < x < \pi$$

29.

$$f(x) = \frac{1}{x-2} - 3$$

30.

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

31.

$$f(x) = \frac{2x}{x^2 - 1}$$

32.

$$f(x) = \frac{x^2 - 6x + 12}{x - 4}$$

33.

$$f(x) = x\sqrt{4-x}$$

34.

$$f(x) = x\sqrt{4-x^2}$$

35.

$$f(x) = \frac{x+2}{x}$$

36.

$$f(x) = x + \frac{32}{x^2}$$

37.

$$f(x) = \frac{x^2+1}{x}$$

38.

$$f(x) = \frac{x^3}{x^2-1}$$

39.

$$f(x) = \frac{x^3}{2x^2-8}$$

40.

$$f(x) = \frac{2x^2-5x+5}{x-2}$$