

Obtén la derivada de las siguientes funciones:

1.  $f(x) = (\sqrt{x} + 2)(2 - \sqrt{x})$

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

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

4.  $f(x) = 2\sqrt{x^3} + 4\sqrt{x} - 5$

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

6.  $f(x) = \frac{7}{x^2 + 5x}$

7.  $f(x) = x^6$

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

9.  $f(x) = 5x^3 - 7x + 3$

10.  $f(x) = \frac{1}{4}x^4 - \frac{3}{2}x^3 + 5x$

11.  $f(x) = \frac{3}{x^6}$

12.  $f(x) = \sqrt[5]{x^3}$

13.  $f(x) = (x^2 + x)^4$

14.  $f(x) = \sqrt{3x^4 - 2}$

15.  $f(x) = 2\sqrt[3]{4x^3 + 3x}$

16.  $f(x) = 4x^3(x^2 - 3)^2$

17.  $f(x) = (2x - 1)\sqrt{x^2 + 4}$

18.  $f(x) = (3x - 5)^3(4x^3 + 3)^4$

19.  $f(x) = \frac{2x}{2x - 5}$

20.  $f(x) = \frac{4 + 7x^2}{4 - 7x^2}$

21.  $f(x) = \frac{3x}{\sqrt{4x^2 + 5}}$

22.  $f(x) = 4^{\frac{3}{x}}$

23.  $f(x) = 3 \cdot 2^x$

24.  $f(x) = e^{2x^2 - e^x - 2}$

25.  $f(x) = 2^{x^2} \cdot 3^{x^2}$

26.  $f(x) = \frac{e^{-x^2}}{4}$

27.  $f(x) = (e^{2x} + 1)^3$

28.  $f(x) = \ln(x^2 + 7)$

29.  $f(x) = \ln(e^x + 2)$

30.  $f(x) = \ln(3 - 4x^3)^5$

31.  $f(x) = \ln[(2x^2 - 1) \cdot (x^2 - 2)]$

32.  $f(x) = \log_2(x^2 + 1)$

33.  $f(x) = \ln\left(\frac{1x}{1+x}\right)$