

## TAREA 4 – 2

Comprobar cada una de las siguientes derivadas, usando las formulas 1 a 7 del formulario.

### PROBLEMA

1.  $\frac{d}{dx}(3x^4 - 2x^2 + 8)$

3.  $\frac{d}{dt}(at^5 - 5bt^3)$

5.  $\frac{d}{dx}\sqrt{v}$

7.  $\frac{d}{dt}(2t^{4/3} - 3t^{2/3})$

9.  $\frac{d}{dx}(x^{2/3} - a^{2/3})$

11.  $y = \frac{\sqrt{x}}{2} - \frac{2}{\sqrt{x}}$

13.  $y = \sqrt{ax} + \frac{a}{\sqrt{ax}}$

15.  $f(t) = (2 - 3t^2)^3$

17.  $y = \frac{1}{\sqrt{a^2 - x^2}}$

19.  $y = \left(a - \frac{b}{x}\right)^2$

21.  $y = x\sqrt{a+bx}$

23.  $y = \frac{a-x}{a+x}$

25.  $y = \frac{\sqrt{a^2 + x^2}}{x}$

27.  $r = \theta^2 \sqrt{3-4\theta}$

29.  $y = \sqrt{\frac{a^2 + x^2}{a^2 - x^2}}$

31.  $y = \sqrt{2px}$

33.  $y = (a^{2/3} - x^{2/3})^{3/2}$

### PROBLEMA

2.  $\frac{d}{dx}(4+3x-2x^3)$

4.  $\frac{d}{dz}\left(\frac{z^2}{2} - \frac{z^7}{7}\right)$

6.  $\frac{d}{dx}\left(\frac{2}{x} - \frac{3}{x^2}\right)$

8.  $\frac{d}{dx}(2x^{3/4} + 4x^{-1/4})$

10.  $\frac{d}{dx}\left(\frac{a+bx+cx^2}{x}\right)$

12.  $s = \frac{a+bt+ct^2}{\sqrt{t}}$

14.  $r = \sqrt{1-2\theta}$

16.  $F(x) = \sqrt[3]{4-9x}$

18.  $f(\theta) = (2-5\theta)^{3/5}$

20.  $y = \left(a + \frac{b}{x^2}\right)^3$

22.  $s = t\sqrt{a^2 + t^2}$

24.  $y = \frac{a^2 + x^2}{a^2 - x^2}$

26.  $y = \frac{x}{\sqrt{a^2 - x^2}}$

28.  $y = \sqrt{\frac{1-cx}{1+cx}}$

30.  $s = \sqrt[3]{\frac{2+3t}{2-3t}}$

32.  $y = \frac{b}{a}\sqrt{a^2 - x^2}$