

Cálculo Diferencial (una variable)

EJERCICIOS

1. $y = 3x$
2. $y = 8 - x^2$
3. $y = (4x + 1)^2$
4. $y = \frac{x^3}{3}$
5. $y = \frac{1}{x-3}$
6. $y = \sqrt{1+x^2}$
7. $y = 1 - 2x^3$
8. $y = \frac{x+2}{x}$
9. $y = \frac{3}{x^2-1}$
10. $y = \frac{1}{x^2}$
11. $y = 2\sqrt{x} - \frac{1}{\sqrt{x}} + 5$
12. $y = \frac{x^3}{3} + \frac{3}{x^3}$
13. $y = \frac{2x+1}{5}$
14. $y = x^2(2x-1)$
15. $y = (x^3+3)(4x^2-5)$
16. $y = (x-5)^4(x+3)^5$
17. $y = (x-1)\sqrt{x}$
18. $y = \frac{x^3-3}{5-x^2}$
19. $y = \frac{5x}{(5-2x)^3}$
20. $y = \frac{(3x^2+5)^3}{2x-3}$
21. $y = \frac{2}{(x^3+5)^5}$
22. $y = \sqrt[3]{6x^2-5}$
23. $y = \sqrt[3]{(4+3x)^2}$
24. $y = \frac{5}{\sqrt{x^2+4}}$
25. $y = \sqrt{\frac{x-2}{x+3}}$

RESPUESTAS

I. Derivadas

1. $y' = 3$
2. $y' = -2x$
3. $y' = 8(4x+1)$
4. $y' = x^2$
5. $y' = -\frac{1}{(x-3)^2}$
6. $y' = \frac{x}{\sqrt{1+x^2}}$
7. $y' = -6x^2$
8. $y' = -\frac{2}{x^2}$
9. $y' = -\frac{6x}{(x^2-1)^2}$
10. $y' = -\frac{2}{x^3}$
11. $y' = \frac{1}{\sqrt{x}} + \frac{1}{3x\sqrt{x}}$
12. $y' = x^2 - \frac{9}{x^4}$
13. $y' = \frac{2}{5}$
14. $y' = 6x^2 - 2x$
15. $y' = 20x^4 - 15x^2 + 24x$
16. $y' = (x-5)^3(x+3)^4(9x-13)$
17. $y' = \frac{3x-1}{2\sqrt{x}}$
18. $y' = -\frac{x^4-15x^2+6x}{(5-x^2)^2}$
19. $y' = \frac{5(5+4x)}{(5-2x)^4}$
20. $y' = \frac{(3x^2+5)^2(30x^2-54x-10)}{(2x-3)^2}$
21. $y' = -\frac{30x^2}{(x^3+5)^6}$
22. $y' = \frac{4x}{\sqrt[3]{(6x^2-5)^2}}$
23. $y' = \frac{2}{\sqrt[3]{4+3x}}$
24. $y' = -\frac{5x}{(x^2+4)\sqrt{x^2+4}}$
25. $y' = \frac{5}{2(x+3)\sqrt{x^2+x-6}}$