Tecnológico de Estudios Superiores de Huixquilucan - Ingeniería Mecatrónica
Cálculo Diferencial - Actividad 5 - Tarea

Resolver los siguientes ejercicios.

Nombre del (la) estudiante: _____

Hallar la derivada de las siguientes funciones:

1. $y = x^3$
2. $y = ax^4 - bx^2$
3. $y = x^{\frac{4}{3}} + 5$
4. $y = \frac{3x^3}{\sqrt[5]{x^2}} - \frac{7x}{\sqrt[3]{x^4}} + 8\sqrt[7]{x^3}$
5. $y = \left(x^2 - 3\right)^5$
6. $y = \sqrt{a^2 + x^2}$
7. $y = \left(3x^2 + 2\right)\sqrt{1 + 5x^2}$
8. $y = \frac{a^2+x^2}{\sqrt{a^2-x^2}}$
9. $y = 3x^4 - 2x^2 + 8$
10. $y = 4 = 3x - 2x^3$
11. $s = at^5 - 5bt^3$
12. $w = \frac{z^2}{2} - \frac{z^7}{7}$
13. $w = \sqrt{v}$
14. $y = \frac{2}{x} - \frac{3}{x^2}$
15. $s = 2t^{\frac{4}{3}} - 3t^{\frac{2}{3}}$
16. $y = 2x^{\frac{3}{4}} + 4x^{-\frac{1}{4}}$
17. $y = x^{\frac{2}{3}} - a^{\frac{2}{3}}$
18. $y = \frac{a+bx+cx^2}{x}$
19. $y = \frac{\sqrt{x}}{2} - \frac{2}{\sqrt{x}}$
20. $s = \frac{a+bt+ct^2}{\sqrt{t}}$
21. $y = \sqrt{ax} + \frac{a}{\sqrt{ax}}$
22. $r = \sqrt{1 - 2\theta}$
23. $s = \left(2 - 3t^2\right)^3$
24. $y = \sqrt[3]{4 - 9x}$
25. $y = \frac{1}{\sqrt{a^2-x^2}}$
26. $r = \left(2 - 3t^2\right)^3$
27. $y = \left(a - \frac{b}{x}\right)^2$
28. $y = \left(a + \frac{b}{x^2}\right)^3$
29. $y = x\sqrt{a + bx}$
30. $s = t\sqrt{a^2 + t^2}$
31. $y = \frac{a-x}{a+x}$
32. $y = \frac{a^2+x^2}{a^2-x^2}$
33. $y = \frac{\sqrt{a^2+x^2}}{x}$
34. $y = \frac{x}{\sqrt{a^2-x^2}}$
35. $r = \theta^2\sqrt{3 - 4\theta}$
36. $y = \sqrt{\frac{1-cx}{1+cx}}$
37. $y = \sqrt{\frac{a^2+x^2}{a^2-x^2}}$
38. $s = \sqrt[3]{\frac{2+3t}{2-3t}}$
39. $y = \sqrt{2px}$
40. $y = \frac{b}{a}\sqrt{a^2 - x^2}$
41. $y = \left(a^{\frac{2}{3}} - x^{\frac{2}{3}}\right)^{\frac{3}{2}}$
42. $y = \sqrt{2x} + \sqrt[3]{3x}$
43. $y = \frac{2-x}{1+2x^2}$
44. $y = \frac{x}{\sqrt{a-bx}}$
45. $s = \frac{\sqrt{a+bt}}{t}$
46. $r = \frac{\sqrt[3]{a+b\theta}}{\theta}$
47. $y = x^2\sqrt{5 - 2x}$
48. $y = x\sqrt[3]{2 + 3x}$
49. $s = \sqrt{2t - \frac{1}{t^2}}$
50. $y = (x + 2)^2\sqrt{x^2 + 2}$
51. $y = \frac{\sqrt{1+2x}}{\sqrt[3]{1+3x}}$