



1.- Calcular las siguientes integrales.

1. $\int x^2(x-1) dx$

7. $\int x(3x+4)(2x-1) dx$

13. $\int \frac{27t^3-1}{\sqrt[3]{t}} dt$

2. $\int 2x(x^2+1) dx$

8. $\int \sqrt{x}(x+1) dx$

14. $\int \frac{5t^2+7}{t^{4/3}} dt$

3. $\int y^3(2y^2-3) dy$

9. $\int \sqrt{x} \left(x + \frac{1}{x}\right) dx$

15. $\int \frac{x^3+1}{x^5} dx$

4. $\int x^4(5-x^2) dx$

10. $\int \frac{x^4+2x^2-1}{\sqrt{x}} dx$

16. $\int \frac{x^3-1}{x^2} dx$

5. $\int 3x^2(x^3+1) dx$

11. $\int \frac{x^2+4x-4}{\sqrt{x}} dx$

17. $\int \frac{x^4+3x^3+x^2+x-5}{x^4} dx$

6. $\int (x+1)(x-1) dx$

12. $\int \frac{(x^2+1)(x^2-2)}{\sqrt[3]{x^2}} dx$

18. $\int \frac{2 \cot(x) - 3 \sin^2(x)}{\sin(x)} dx$

19. $\int \sec(x)(\sec(x) + \tan(x)) dx$

2.- Calcular las siguientes integrales

1. $\int (x-2)^2 dx$

7. $\int \left(\sqrt{x} + \frac{1}{x}\right)^2 dx$

13. $\int x^2(4x^3-2)^2 dx$

2. $\int x(x-2)^2 dx$

8. $\int (\sqrt{x}+x)^2 dx$

14. $\int (x+2)(x^2-2x+4) dx$

3. $\int x^2(x+2)^2 dx$

9. $\int (x+\sqrt{x})^3 dx$

15. $\int (\sqrt{x}-1)(x+\sqrt{x}+1) dx$

4. $\int (3u^5-2u)^3 du$

10. $\int \left(x^2 + \frac{1}{\sqrt{x}}\right)^3 dx$

16. $\int (\sqrt{x}+1)(x-\sqrt{x}+1) dx$

5. $\int (a^{2/3} - x^{2/3})^3 dx$

11. $\int (a+bx^3)^2 dx$

17. $\int \frac{(x^2-x^3)^4}{\sqrt{x}} dx$

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

12. $\int x(3x^2+1)^2 dx$

18. $\int \frac{(\sqrt{2}-\sqrt{x})^4}{\sqrt{2x}} dx$

3.- Usando un cambio de variables apropiado, y propiedades cuando sea necesario (o conveniente), calcular las siguientes integrales.

1. $\int (2x+3)^6 dx$

4. $\int (3-2x^2)^{-2/3} x dx$

7. $\int (7x+6)^{-5} dx$

2. $\int (2t+1)^{1/3} dt$

5. $\int (x^2+1)^3 x dx$

8. $\int (x^2-4)^7 x dx$

3. $\int (2x^2+3)^{7/3} x dx$

6. $\int (x^3+1)^{7/5} x^2 dx$

9. $\int (4-x^2)^3 x dx$



10. $\int (2x^3 - 3)^{4/3} x^2 dx$

11. $\int x^2 (x^3 - 4)^{10} dx$

12. $\int (x^2 - 2x + 1)^{4/3} dx$

13. $\int \sqrt[3]{3x-4} dx$

14. $\int x^2 \sqrt{x^3 + 1} dx$

15. $\int u^3 \sqrt{u^4 + 1} du$

16. $\int x \sqrt{x^2 - 9} dx$

17. $\int 3x \sqrt{4 - x^2} dx$

18. $\int x \sqrt[5]{5 - x^2} dx$

19. $\int \frac{1}{\sqrt[3]{3y+1}} dy$

20. $\int \frac{x}{(3x^2 + 2)^2} dx$

21. $\int \frac{x^2 + 2x}{\sqrt[3]{x^3 + 3x^2 + 1}} dx$

22. $\int \frac{1}{(2u + 1)^2} du$

23. $\int \frac{x}{\sqrt{x^2 - 1}} dx$

24. $\int \left(1 + \frac{1}{t}\right)^2 \frac{1}{t^2} dt$

25. $\int \frac{x^3}{(1 - 2x^4)^5} dx$

26. $\int \left(x + \frac{1}{x}\right)^{3/2} \left(\frac{x^2 - 1}{x^2}\right) dx$

27. $\int \frac{4 \operatorname{sen}(x)}{(1 + \cos(x))^2} dx$

28. $\int \frac{1}{\sqrt{x-4}} dx$

29. $\int \frac{1}{\sqrt{4-3x}} dx$

30. $\int \frac{1}{\sqrt{2x+9}} dx$

31. $\int \frac{1}{\sqrt[3]{8x-4}} dx$

32. $\int \frac{1}{3x+2} dx$

33. $\int \frac{1}{x-3} dx$

34. $\int \frac{1}{2x+4} dx$

35. $\int \frac{1}{8x-1} dx$

36. $\int \frac{1}{2-x} dx$

37. $\int \frac{1}{2-7x} dx$

38. $\int \frac{1}{3-x} dx$

39. $\int \frac{1}{1-\frac{x}{2}} dx$

40. $\int \frac{2x+1}{x^2+x+4} dx$

41. $\int \frac{x-2}{x^2-4x+7} dx$

42. $\int \frac{x^2+3}{x^3+9x-2} dx$

43. $\int \frac{3x^2+4x+2}{x^3+2x^2+2x+1} dx$

44. $\int \frac{2x+7}{\sqrt{x^2+7x+1}} dx$

45. $\int \frac{3x-6}{3x^2-12x+40} dx$

46. $\int \frac{\sqrt{1+\frac{1}{3x}}}{x^2} dx$

47. $\int \frac{\cos(4x)}{2\sqrt{\operatorname{sen}(4x)}} dx$

48. $\int \cos^2(x) \operatorname{sen}(x) dx$

49. $\int \operatorname{sen}^3(x) \cos(x) dx$

50. $\int x^2 \sec^2(x^3) dx$

51. $\int \cos(x)(4 + \operatorname{sen}(x))^7 dx$

52. $\int \frac{1}{x^2+7} dx$

53. $\int \frac{1}{\sqrt{4-x^2}} dx$

54. $\int \frac{e^x}{\sqrt{1-e^{2x}}} dx$

55. $\int \frac{\operatorname{sen}(\ln(x))}{x} dx$

56. $\int \frac{x}{\sqrt{x^2+1}} dx$

57. $\int \frac{1}{\sqrt{7-8x^2}} dx$

58. $\int \frac{e^x}{e^x-1} dx$

59. $\int \frac{x - \sqrt{\arctan(2x)}}{1+4x^2} dx$

60. $\int \sqrt{\frac{\arcsen(x)}{1-x^2}} dx$

61. $\int \frac{e^x}{1+e^{2x}} dx$

62. $\int \frac{\sqrt[3]{1-\ln(x)}}{x} dx$

63. $\int e^{-\tan(x)} \sec^2(x) dx$

64. $\int \frac{\arcsen(x) + x}{\sqrt{1-x^2}} dx$

65. $\int \frac{e^{\arctan(x)} + x \ln(1+x^2) + 1}{1+x^2} dx$