Ejercicios sobre integrales indefinidas por sustitución

En los ejercicios 1 a 50 evalúe la integral indefinida utilizando una sustitución apropiada

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

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

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

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

5. $\int \frac{\sec 3x\tan 3x}{\sec 3x - 1}dx$

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

7. $\int \sqrt{\tan x}\,\sec^2 x\,dx$

8. $\int \frac{(1+\ln x)^2}{x}\,dx$

9. $\int \frac{dx}{\sqrt{\sqrt{x}+3}}$

10. $\int 2\operatorname{sen} t\,\sqrt[3]{1+\cos t}\,dt$

11. $\int e^{\tan 2x}\sec^2 2x\,dx$

12. $\int \frac{1+\cos^2\theta}{\cos^2\theta}d\theta$

13. $\int \sec x\cdot\tan x\cdot\cos(\sec x)\,dx$

14. $\int \frac{2+\ln^2 x}{x(1-\ln x)}\,dx$

15. $\int \tan x\ln(\cos x)\,dx$

16. $\int \frac{\operatorname{sen}^2 x}{1+\cos x}\,dx$

17. $\int \frac{x}{\sqrt{6-2x}}\,dx$

18. $\int x^2\sqrt{1-x}\,dx$

19. $\int \frac{x^5}{\sqrt{1-x^3}}dx$

20. $\int (\tan x+\sec x)^2\,dx$

21. $\int \frac{1}{1+\cos x}dx$

22. $\int x^2(x+1)^{1/3}\,dx$

23. $\int \frac{2x-5}{\sqrt{16-x^2}}\,dx$

24. $\int x\sqrt{2x-1}\,dx$

25. $\int 2x\operatorname{sen}(4x^2)\,dx$

26. $\int \frac{dx}{x^2-4x+5}\,dx$

27. $\int \left(t+\frac{1}{t}\right)^{3/2}\left(\frac{t^2-1}{t^2}\right)dt$

28. $\int \frac{6x+1}{x^2+9}dx$

29. $\int \tan x\,\sec^3 x\,dx$

30. $\int \frac{1}{x\ln x}\,dx$

31. $\int \frac{\cos(\ln x)}{x}\,dx$

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

33. $\int \frac{x}{4+x^2}\,dx$

34. $\int \frac{x+1}{9+x^2}\,dx$

35. $\int \frac{1-\cos x}{x+\operatorname{sen} x}\,dx$

36. $\int \frac{1}{x(\ln x)^2}\,dx$

37. $\int x^2 e^{-5x^3}\,dx$

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

39. $\int \frac{\tan^{-1} x}{1+x^2}\,dx$

40. $\int e^{5x}\sqrt{4-3e^{5x}}\,dx$

41. $\int y^5\sqrt{y^3+1}\,dy$

42. $\int \frac{2x+6}{x^2+2x+5}\,dx$

43. $\int \frac{\operatorname{sen} x}{1+\cos^2 x}\,dx$ **43.**

44. $\int \frac{x^4+10}{x^2+1}\,dx$

45. $\int \frac{x^3+x}{\sqrt{9-x^4}}dx$

46. $\int \frac{1}{t^2}\sqrt{1+\frac{1}{t}}\,dt$

47. $\int \frac{3-6x}{x^2+2x+2}dx$

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

49. $\int (x-1)^2\sqrt{x+2}\,dx$

50. $\int \frac{\operatorname{sen}^2 x\sec x}{1+\sec x}dx$

51. $\int \frac{x^4+10}{x^2+2}dx$

52. $\int \frac{2x^3}{x^2-4}dx$

53. $\int \frac{\ln^2 x+2}{x(1-\ln x)}dx$

54. $\int \frac{3x^5-2x^3+5x^2-2}{x^3+1}dx$

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

56. $\int \frac{\cot\sqrt{x}}{\sqrt{x}}dx$

57. $\int \frac{e^{3x}+1}{e^x}dx$

58. $\int \frac{e^{2x}}{(1-2e^{2x})^2}dx$

59. $\int \frac{e^{2x}}{e^x+5}dx$

60. $\int \frac{1}{e^{-x}+5}dx$

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

62. $\int \frac{e^x}{e^{2x}+6e^x+18}dx$

63. $\int \frac{x+1}{\sqrt{5-x^2-4x}}dx$

64. $\int \frac{3-x}{\sqrt{16+6x-x^2}}dx$

65. $\int \frac{1}{x\sqrt{2x^2-9}}dx$

66. $\int \frac{\tan x}{\sqrt{\sec^2 x-4}}dx$