Calcula las siguientes integrales:

1.
$$\int (4x^5 - 2x^2) dx$$

2.
$$\int (3x^3 - 5x^2 - 2x + 4) dx$$

3.
$$\int (5x^6 - 3x^2) dx$$

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

$$5. \quad \int (4x^5 - senx + e^x) \, dx$$

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

$$7. \quad \int (x^5 - 3^x \cdot \ln 3 - \cos x) dx$$

8.
$$\int (3x^6 - \frac{2}{x} - 2senx + 5\cos x) dx$$

$$9. \quad \int (5^x - 2sen2x + \cos 3x) dx$$

10.
$$\int (3^x - x \cdot e^{x^2} + x^3 \cdot \cos 3x^4) dx$$

11.
$$\int (\frac{1}{x^4} - \sqrt{x} + \sec^2 x) dx$$

12.
$$\int x^2 \sqrt{x} \, dx$$

$$13. \int_{0}^{3} \sqrt{x^2} dx$$

14.
$$\int \frac{dx}{\sqrt[5]{x}}$$

$$15. \int \frac{3x^4}{5} dx$$

$$16. \int \sqrt{5x} \ dx$$

$$17. \int \frac{dx}{\sqrt[5]{8x^2}}$$

18.
$$\int 3x^{5/2} dx$$

$$19. \int (3-4x) dx$$

$$20. \int (x^5 - 7 + \frac{4}{x^2}) \, dx$$

$$21. \int \frac{x^7 - 7x^2 + 4}{x} \, dx$$

22.
$$\int (x+4)^3 dx$$

23.
$$\int (3x+4)^3 dx$$

24.
$$\int x^2 \cdot (x^3 - 2)^5 dx$$

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

$$26. \int \left(\sqrt{x} - \sqrt{a}\right)^2 dx$$

27.
$$\int \sqrt{x-a} \ dx$$

28.
$$\int (\sqrt{x} + 1) \cdot (x - \sqrt{x} + 1) dx$$

29.
$$\int (2x+5) \cdot \sqrt{x^2+5x+7} \, dx$$

$$30. \int x \cdot \sqrt[3]{x^2 + 5} dx$$

31.
$$\int \frac{x}{\sqrt{1-x^2}} dx$$

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

$$33. \int \frac{x}{\sqrt{x^2 + 1}} dx$$

34.
$$\int \frac{x}{x^2 - 5} dx$$

$$35. \int x \cdot 7^{x^2} dx$$

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

37.
$$\int (sen(2x+5) - x^4 \cdot \cos 3x^4) dx$$

38.
$$\int [sen^2x \cdot \cos x - \cos(x+1)^2 \cdot (x+1)]dx$$

$$39. \int \cos \frac{x}{\sqrt{2}} \, dx$$

$$40. \int tg^3 \frac{x}{3} \cdot \sec^2 \frac{x}{3} dx$$

$$41. \int \frac{\sqrt{\lg x}}{\cos^2 x} dx$$

42.
$$\int x \cdot \text{sen} (1 - x^2) dx$$

$$43. \int \frac{dx}{\operatorname{tg}(x/5)}$$

44.
$$\int 2x \cdot \sin x^2 dx$$

45.
$$\int (2x+1) \cdot e^{x^2 + x} \, dx$$

46.
$$\int (x+1) \cdot e^{x^2+2x} dx$$

$$47. \int \cos(2x+1) dx$$

48.
$$\int \frac{\ln x}{x} dx$$

$$49. \int \frac{\ln^3 2x}{x} \, dx$$

50.
$$\int \operatorname{sen}(2x + \pi) \, dx$$

51.
$$\int tg^2 x \ dx$$

$$52. \int tg^3 x \ dx$$

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

54.
$$\int \sin^4 x \cdot \cos x \, dx$$

$$55. \int \frac{1}{x^2} \cdot \cos \frac{1}{x} \, dx$$

$$56. \int \frac{1}{5x} \cdot (\ln x)^7 dx$$

$$57. \int x \cdot \sqrt{1 - x^2} \ dx$$

$$58. \int \frac{e^{2x}}{\sqrt{1 - e^{4x}}} \, dx$$

$$59. \int e^{sen5x} \cdot \cos 5x \, dx$$

$$60. \int \frac{\sin x}{1 + \cos^2(x/2)} dx$$

$$61. \int \left(3x + 4x\sqrt{2x} + \frac{1}{\sqrt{2x}}\right) dx$$

$$62. \int \left(e^x + 3^x - sen2x + \frac{4}{x}\right) dx$$

$$63. \int \frac{5x + \sqrt{3x}}{x^2} \, dx$$

$$64. \int \frac{x^3 + -2\sqrt[3]{x} + 2x\sqrt{x} - 1}{5x} dx$$

$$65. \int \frac{4^x + 6^x}{2^{x-1}} \, dx$$

66.
$$\int \frac{x^2+2}{(x+1)^2-2x} dx$$

67.
$$\int \cot^2 x \, dx$$

$$68. \int \sqrt{x\sqrt{x^2\sqrt{x^3}}} \, dx$$

69.
$$\int x \cdot (3x^2 - 5)^5 dx$$

70.
$$\int \frac{3x+1}{x^2+4} \, dx$$

71.
$$\int \frac{e^{2x}}{\sqrt{e^{2x} + 3}} \, dx$$

72.
$$\int \frac{3x^2 - 4x + 1}{2x^3 - 4x^2 + 2x + 5} dx$$

73.
$$\int sen 3x \cdot \cos 3x \, dx$$

$$74. \int \frac{2x}{\cos^2 5x^2} dx$$

$$75. \int \frac{dx}{\sqrt{9-x^2}}$$

$$76. \int \frac{x}{\sqrt{5-x^2}} dx$$

77.
$$\int \frac{dx}{\sqrt{x}(1-\sqrt{x})}$$

$$78. \int \frac{1}{x^2 + 7} dx$$

$$79. \int \frac{dx}{3x^2 + 5}$$

80.
$$\int \frac{x^2}{1+x^6} dx$$

$$81. \int \frac{x}{x^4 + 3} dx$$

82.
$$\int \left(x + \frac{1}{\sqrt{x}} \right) \cdot \sqrt[3]{x} \, dx$$

$$83. \int \frac{\ln^5 6x}{3x} dx$$

84.
$$\int \frac{3}{x \cdot \ln 2x} dx$$

85.
$$\int sen^2 5x \cdot \cos 5x \, dx$$

$$86. \int \frac{\sqrt{7 + 2tgx}}{\cos^2 x} dx$$

87.
$$\int \frac{1 - sen^2 x}{senx \cdot \cos x} dx$$

88.
$$\int tg(2x+1)dx$$

$$89. \int \frac{x}{\sqrt{x^2 + 1}} dx$$

90.
$$\int x \cdot \sqrt{x^2 + 1} \, dx$$

91.
$$\int \frac{x}{x^4 + 9} dx$$

92.
$$\int \frac{senx + \cos x}{\cos^3 x} dx$$

$$93. \int \frac{\sqrt[3]{x}}{x \cdot \cos^2 \sqrt[3]{x}} dx$$

$$94. \int \frac{2e^x}{\sqrt{1-e^{2x}}} dx$$

95.
$$\int \frac{5x+2}{1+2x^2} dx$$

$$96. \int \frac{1+tg^2x}{\sqrt{1+2tgx}} dx$$

97.
$$\int \frac{e^{\sqrt{2x}}}{\sqrt{x}} dx$$

98.
$$\int \frac{2x^3}{1+x^8} dx$$

$$99. \int \frac{2^x}{1+4^x} dx$$

$$100. \qquad \int \frac{2e^{-x}}{2+e^{-x}} dx$$

$$101. \qquad \int \frac{\sqrt{arcsenx}}{\sqrt{1-x^2}} dx$$

102.
$$\int \operatorname{tg} x \, dx$$

$$103. \qquad \int \frac{3x}{5x^2 + 4} \, dx$$

$$104. \qquad \int \left(a + bx^3\right)^2 dx$$

105.
$$\int \frac{(x^2+1)\cdot(x^2-2)}{\sqrt[3]{x^2}} dx$$

$$106. \qquad \int \frac{x}{2x^2 + 3} \, dx$$

$$107. \qquad \int \frac{x - \sqrt{\arctan 2x}}{1 + 4x^2} dx$$

$$108. \quad \int \frac{1}{3 + \sqrt{x+2}} dx$$

$$109. \qquad \int \frac{\sqrt{x} - 1}{\sqrt{x} + 1} dx$$

$$110. \qquad \int \frac{x}{\sqrt{1-x^4}} \, dx$$

$$111. \qquad \int \frac{1 + 2\sin x \cos x}{\cos^2 x} dx$$

112.
$$\int \sin^3 x \cdot \cos x \, dx$$

113.
$$\int \cot^3 x \, dx$$

$$114. \qquad \int \operatorname{tg}^4 x \, dx$$

115.
$$\int \sec^2 x \cdot \operatorname{tg}^2 x \, dx$$

116.
$$\int tg^5 x \cdot \sec x^2 dx$$

117.
$$\int (e^x + e^{-x})^3 dx$$

$$118. \qquad \int \frac{1+x}{1+\sqrt{x}} \, dx$$

$$119. \qquad \int \frac{dx}{\sqrt{e^x - 1}}$$

$$120. \qquad \int \frac{e^{2x}}{\sqrt{e^x + 1}} \, dx$$

121.
$$\int x \cdot \sqrt{x-2} \ dx$$

122.
$$\int x \cdot \sqrt{1+x} \ dx$$

$$123. \qquad \int x^5 \cdot \sqrt{1 - x^3} \ dx$$

124.
$$\int \frac{x}{\sqrt{x+1}} dx$$

$$125. \qquad \int \frac{\sqrt{x}}{1+x} \, dx$$

126.
$$\int x \cdot \sin x \, dx$$

127.
$$\int x \cdot e^x dx$$

128.
$$\int x^2 \cdot e^x dx$$

$$129. \qquad \int (x^2 - 2x - 3) \cdot \ln x \, dx$$

130.
$$\int \ln x \, dx$$

131.
$$\int x \cdot \ln x \, dx$$

132.
$$\int e^x \cdot \cos x \, dx$$

$$133. \quad \int x^2 \cdot e^{3x} dx$$

$$134. \quad \int x^3 \cdot e^{2x} \ dx$$

135.
$$\int x \cdot \sin x \cdot \cos x \ dx$$

136.
$$\int x \cdot 2^x dx$$

137.
$$\int x \cdot \sin^2 x \, dx$$

138.
$$\int x \cdot 2^{-x} dx$$

$$139. \qquad \int (x-1) \cdot e^x dx$$

140.
$$\int (x^2 - 1) \cdot e^x dx$$

141.
$$\int 3^x \cdot \cos x \, dx$$

142.
$$\int e^x \cdot \sin x \, dx$$

143.
$$\int \arctan x \, dx$$

144.
$$\int x \cdot \operatorname{arctg} x \, dx$$

145.
$$\int \frac{\ln x}{2} dx$$

146.
$$\int \frac{\ln x}{(1+x)^2} dx$$

147.
$$\int (\ln x)^2 dx$$

148.
$$\int \cos x \cdot \ln(\sin x) dx$$

149.
$$\int \operatorname{sen} \sqrt{x} \, dx$$

150.
$$\int \operatorname{sen}(\ln x) \ dx$$