

1.- Resuelva las siguientes integrales, haciendo uso de la descomposición en suma de fracciones simples.

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

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

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

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

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

$$6. \int \frac{x^3 + 2}{x^2 + 4} dx$$

$$7. \int \frac{x^3 + 4x^2 - 4x - 1}{x^2 + 1} dx$$

$$8. \int \frac{x^2 + 2x - 1}{x^2 - 27} dx$$

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

$$10. \int \frac{x^2 - 2}{(x + 1)(x - 1)} dx$$

$$11. \int \frac{x^5}{(x - 2)^2} dx$$

$$12. \int \frac{7}{(x - 2)(x + 5)} dx$$

$$13. \int \frac{x}{(x + 1)(x + 2)(x + 3)} dx$$

$$14. \int \frac{x^2 + 2x + 3}{(x - 1)(x + 1)(x - 2)} dx$$

$$15. \int \frac{3x - 2}{(x + 2)(x + 1)(x - 1)} dx$$

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

$$17. \int \frac{x - 3}{(x + 1)^2(x - 2)} dx$$

$$18. \int \frac{x^2 - 1}{(x - 1)^3} dx$$

$$19. \int \frac{2x + 3}{(x + 2)(x - 1)^3} dx$$

$$20. \int \frac{2x^2 - 1}{(x + 1)^2(x - 3)} dx$$

$$21. \int \frac{x^2}{(x - 1)^2(x + 1)} dx$$

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

$$23. \int \frac{x^3 + x^2 - 2x - 3}{(x + 1)^2(x - 2)^2} dx$$

$$24. \int \frac{x^2 + 3x + 3}{(x + 1)(x^2 + 1)} dx$$

$$25. \int \frac{x^2 + 3x + 3}{(x^2 + 2)(x^2 + 3)} dx$$

$$26. \int \frac{x^2 - 2x + 3}{(x - 1)^2(x^2 + 4)} dx$$

$$27. \int \frac{x^2 - 2x - 3}{(x - 1)(x^2 + 2x + 2)} dx$$

$$28. \int \frac{x^3 - x - 2}{(x + 1)^2(x^2 + x + 1)} dx$$

$$29. \int \frac{x^2 - x - 1}{(x + 1)(x^2 + x + 1)} dx$$

$$30. \int \frac{3x - 4}{(x - 2)(x^2 + x + 1)} dx$$

$$31. \int \frac{x^3 - 2x^2 + 3x - 4}{(x - 1)^2(x^2 + 2x + 2)} dx$$

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

$$33. \int \frac{x + 3}{x(x^2 - 1)} dx$$

$$34. \int \frac{2x^2 - 3x + 4}{x^3 + 2x^2 + 2x} dx$$

$$35. \int \frac{4x - 2}{x^3 - x^2 - 2x} dx$$

$$36. \int \frac{1 - 2x}{3x^3 + 3x^2 + 3x} dx$$

$$37. \int \frac{x + 3}{x^2 - 3x + 2} dx$$

$$38. \int \frac{x^2 + 1}{x^3 - x} dx$$

$$39. \int \frac{x^2}{x^4 - 5x^2 + 4} dx$$

$$40. \int \frac{1 - 3x^2}{x^4 - 3x^2 + 2} dx$$

$$41. \int \frac{x^2 - 3x + 1}{x^4 - 5x^2 + 4} dx$$

$$42. \int \frac{x^3 - x^2 + x - 1}{x^4 - 13x^2 + 36} dx$$

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

$$44. \int \frac{2x^3 - x^2 + 4x - 2}{x^4 - x^3 + x^2 - x} dx$$

$$45. \int \frac{3x^2 - 2x - 1}{x^4 + 3x^2 - 4} dx$$

$$46. \int \frac{1 - 2x^2}{4x^3 - 9x} dx$$

$$47. \int \frac{x^2 - 3x + 4}{x^4 - 3x^3 + 3x^2 - 3x + 2} dx$$

$$48. \int \frac{x^3 - 2x^2 + x - 3}{x^4 - 3x^3 + 3x^2 - 3x + 2} dx$$

$$49. \int \frac{1 - x - x^2}{x^3 - x^2 + x - 1} dx$$

$$50. \int \frac{3x^3 - 2x + 1}{x^4 + 3x^3 + 6x^2 + 12x + 8} dx$$

$$51. \int \frac{1 - 2x}{4x^2 - 9x} dx$$

$$52. \int \frac{1}{x^4 + 4} dx$$

$$53. \int \frac{1}{x^4 + 9} dx$$

$$54. \int \frac{1}{x^4 + 1} dx$$