

Ejercicios sobre integrales con sustitución trigonométrica

En los ejercicios siguientes, calcule la integral que involucra funciones trigonométricas

1. $\int \frac{\sqrt{16+x^2}}{x^2} dx$

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

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

4. $\int x\sqrt{x^2+5} dx$

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

6. $\int \frac{dx}{(x^2-9)^{3/2}}$

7. $\int \sqrt{x^2+5} dx$

8. $\int \frac{dx}{\sqrt{36-x^2}}$

9. $\int \frac{dx}{x\sqrt{36-x^2}}$

10. $\int \frac{dx}{x\sqrt{9+x^2}}$

11. $\int \frac{dx}{(x^2+9)^2}$

12. $\int \frac{dx}{(x^2+9)^{5/2}}$

13. $\int \frac{\sqrt{16-x^2}}{x^4} dx$

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

15. $\int \sqrt{6x-x^2} dx$

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

17. $\int \frac{dx}{x^4\sqrt{9+x^2}}$

18. $\int \frac{dx}{x\sqrt{16+x^4}}$

19. $\int \frac{\sqrt{16-e^{2x}}}{e^x} dx$

20. $\int \frac{e^{-t}}{(9e^{-2t}+4)^{3/2}} dt$

21. $\int \frac{e^t}{(e^{2t}+8e^t+7)^{3/2}} dt$

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

23. $\int \frac{x^3}{\sqrt{16+x^2}} dx$

24. $\int \frac{x^3}{\sqrt{25+x^2}} dx$

25. $\int \frac{x}{\sqrt{x^2-6x+5}} dx$

26. $\int \frac{x}{\sqrt{x^2+6x-7}} dx$

27. $\int \frac{x}{(x^2+8x+25)^{3/2}} dx$

28. $\int \frac{x}{\sqrt{x^2-10x+21}} dx$

29. $\int \frac{x}{\sqrt{x^2+8x+7}} dx$

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

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

32. $\int \frac{\ln^3 x dx}{x\sqrt{\ln^2 x-4}}$

33. $\int_0^2 \frac{x^3 dx}{\sqrt{16-x^2}}$

34. $\int_1^3 \frac{dx}{x^4\sqrt{x^2+3}}$

35. $\int_4^6 \frac{dx}{x\sqrt{x^2-4}}$

36. $\int_0^5 x^2\sqrt{25-x^2} dx$