

Четврти домаћи задатак из Математике 2

Израчунаати интеграле:

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| 1. $\int \cos^4 x dx$ | 2. $\int \sin x \cdot \operatorname{arctg}(\cos^2 x) dx$ | 3. $\int \sin x \sqrt{1 + \cos^2 x} dx$ |
| 4. $\int \frac{\cos^6 x}{\sin x} dx$ | 5. $\int \frac{dx}{3 \sin^2 x + \cos^2 x}$ | 6. $\int \frac{dx}{2 \sin x + 3 \cos x - 5}$ |
| 7. $\int x \frac{\sin x}{\cos^4 x} dx$ | 8. $\int \frac{\sin^5 x}{\cos^2 x} dx$ | 9. $\int \frac{dx}{\cos x \sin^5 x}$ |
| 10. $\int \sin^2 x \cos^4 x dx$ | 11. $\int \sin^5 x \cos^2 x dx$ | 12. $\int x \sin x \sqrt{1 + \cos^2 x} dx$ |
| 13. $\int \frac{dx}{3 + 2 \cos x} dx$ | 14. $\int \frac{\sin^2 x}{\cos^6 x} dx$ | 15. $\int \frac{\sin^6 x}{\cos^3 x} dx$ |
| 16. $\int (2 + 3 \cos x)^3 dx$ | 17. $\int \cos x \cos^3(\sin x) dx$ | 18. $\int (3 + 2 \operatorname{tg} x)^2 dx$ |
| 19. $\int \frac{\sin x + 2 \cos x - 3}{\sin x - 2 \cos x + 3} dx$ | 20. $\int \frac{1 + \sin x}{\cos^2 x} dx$ | 21. $\int \frac{(1 + 4 \cos^2 x)^2}{\sin^2 x} dx$ |
| 22. $\int \operatorname{tg}^5 x dx$ | 23. $\int \frac{dx}{2\sqrt{x} + \sqrt[3]{x} - 3}$ | 24. $\int \operatorname{tg} x \sqrt{1 + \cos^4 x} \frac{dx}{\cos^2 x}$ |
| 25. $\int \frac{dx}{(2 + \cos x)^2}$ | 26. $\int \frac{x dx}{\sqrt{4x^2 + 4x + 3}}$ | 27. $\int \frac{dx}{x - \sqrt{x^2 + 2x + 4}}$ |
| 28. $\int \frac{1}{\sqrt[6]{(x-5)^5(x+7)^7}} dx$ | 29. $\int \frac{x dx}{\sqrt{1-2x-3x^2}}$ | 30. $\int \frac{dx}{x(1 + \sqrt[3]{x^2})}$ |
| 31. $\int \frac{1}{x^3} \cdot \sqrt[5]{\frac{x}{x+1}} dx$ | 32. $\int \sqrt[3]{x} \sqrt[4]{(2 + \sqrt[3]{x^2})} dx$ | 33. $\int \frac{dx}{(1-x)\sqrt{1-x^2}}$ |
| 34. $\int \frac{1}{(2-x)} \cdot \sqrt[3]{\frac{2-x}{2+x}} dx$ | 35. $\int \frac{dx}{(4+x^2)^{\frac{3}{2}}}$ | 36. $\int \frac{1 - \sqrt{1+x+x^2}}{x\sqrt{1+x+x^2}} dx$ |
| 37. $\int \frac{x dx}{\sqrt{2+3\sqrt{x^2}}}$ | 38. $\int \frac{x^2}{1 + \sqrt{1-2x-x^2}} dx$ | 39. $\int \sqrt{x} \sqrt[4]{1 - \frac{1}{\sqrt{x^3}}} dx$ |
| 40. $\int \frac{\sqrt{-x^2+4x+5}}{5-x} dx$ | 41. $\int (x^2+x)\sqrt{4x-x^2} dx$ | 42. $\int \sqrt{4x^2+9} dx$ |
| 43. $\int \frac{dx}{(1+x^2)\sqrt{x^2-1}}$ | 43. $\int \frac{dx}{x\sqrt{1+x^5+x^{10}}}$ | 45. $\int \frac{dx}{x^2\sqrt{(4-x^2)^3}}$ |