Misollar. Aniqmas integrallarni toping:

1. a) $\int \sqrt{\cos x}\, \sin x\, dx$; b) $\int \dfrac{4x-1}{x^2-4x+8}\, dx$; в) $\int \ln x\, dx$;

2. g) $\int \dfrac{x}{x^3+1}\, dx$; d) $\int \dfrac{dx}{3+5\cos x}$.

3. a) $\int (\ln x)^3\, \dfrac{dx}{x}$; b) $\int \dfrac{5x+8}{x^2+2x+5}\, dx$; в) $\int (2x+1)\sin 3x\, dx$;

4. g) $\int \dfrac{x+20}{x^3-8}\, dx$; d) $\int \dfrac{dx}{\sin x+\cos x}$.

5. a) $\int \dfrac{arctg\, x}{1+x^2}\, dx$; b) $\int \dfrac{3x-2}{x^2+4x+8}\, dx$; в) $\int (x-1)\, e^{2x}\, dx$;

6. g) $\int \dfrac{3x+1}{x^3+x}\, dx$; d) $\int \dfrac{\cos x}{1+\cos x}\, dx$.

7. a) $\int \dfrac{\cos x}{\sqrt[3]{\sin x}}\, dx$; b) $\int \dfrac{8x-3}{x^2+6x+10}\, dx$; в) $\int x\cos 2x\, dx$;

8. g) $\int \dfrac{2x+5}{x^3+2x}\, dx$; d) $\int \dfrac{\sin x}{1-\sin x}\, dx$.

9. a) $\int e^{-x^2} x\, dx$; b) $\int \dfrac{7x+3}{x^2-4x+5}\, dx$; в) $\int arctg\, 2x\, dx$;

10. g) $\int \dfrac{3x-1}{x^3+3x}\, dx$; d) $\int \dfrac{dx}{8-4\sin x+7\cos x}$.

11. a) $\int \dfrac{x^3}{2+x^4}\, dx$; b) $\int \dfrac{9x+10}{x^2-6x+10}\, dx$; в) $\int (5x+1)\ln x\, dx$;

12. g) $\int \dfrac{8x+5}{x^3+x^2+2x+2}\, dx$; d) $\int \dfrac{dx}{2\sin x+\cos x+3}$.

13. a) $\int \sqrt{\ln x}\, \dfrac{dx}{x}$; b) $\int \dfrac{3x+10}{x^2-8x+10}\, dx$; в) $\int (8x-2)\sin 5x\, dx$;

14. g) $\int \dfrac{7x-2}{x^3-3x^2+x-3}\, dx$; d) $\int \dfrac{1+tg\, x}{1-tg\, x}\, dx$.

15. a) $\int \dfrac{x}{\sqrt{1-2x^2}}\, dx$; b) $\int \dfrac{3x+7}{x^2-8x+17}\, dx$; в) $\int (x-3)e^{-2x}\, dx$;

16. g) $\int \dfrac{5x-11}{x^3+4x}\, dx$; d) $\int \dfrac{\sin x}{(1-\cos x)^3}\, dx$.

17. a) $\int \dfrac{x^3}{2x^4+5}\, dx$; b) $\int \dfrac{5x-2}{x^2-2x+5}\, dx$; в) $\int \sqrt{x}\, \ln 3x\, dx$;

18. g) $\int \dfrac{3x}{x^3+x^2+3x+3}\, dx$; d) $\int \dfrac{\sin 2x}{1+\sin^2 x}\, dx$.

19. a) $\int \dfrac{dx}{x\ln x}$; b) $\int \dfrac{7x-3}{x^2+6x+13}\, dx$; в) $\int (2x+8)\, e^{-7x}\, dx$;

20. g) $\int \dfrac{2x}{x^3-1}\,dx$;   d) $\int \dfrac{\cos 2x}{\cos^4 x+\sin^4 x}\,dx$.

21. a) $\int \sqrt{\cos x}\,\sin x\,dx$;   b) $\int \dfrac{4x-1}{x^2-4x+8}\,dx$;   в) $\int \ln x\,dx$;

22. g) $\int \dfrac{x}{x^3+1}\,dx$;   d) $\int \dfrac{dx}{3+5\cos x}$.

23. a) $\int (\ln x)^3\,\dfrac{dx}{x}$;   b) $\int \dfrac{5x+8}{x^2+2x+5}\,dx$;   в) $\int (2x+1)\sin 3x\,dx$;

24. g) $\int \dfrac{x+20}{x^3-8}\,dx$;   d) $\int \dfrac{dx}{\sin x+\cos x}$.

25. a) $\int \dfrac{arctg\,x}{1+x^2}\,dx$;   b) $\int \dfrac{3x-2}{x^2+4x+8}\,dx$;   в) $\int (x-1)\,e^{2x}\,dx$;

26. g) $\int \dfrac{3x+1}{x^3+x}\,dx$;   d) $\int \dfrac{\cos x}{1+\cos x}\,dx$.

1. $\displaystyle\int_{1}^{3} x^{3}\,dx$

2. $\displaystyle\int_{1}^{2}\left(x^{2}+\frac{1}{x^{4}}\right)dx$

3. $\displaystyle\int_{1}^{4} \sqrt{x}\,dx$

4. $\displaystyle\int_{0}^{1}\frac{dx}{\sqrt{4-x^{2}}}$

5.