TOSHKENT AMALIY FANLAR UNIVERSITETI

14 – Amaliy mashg'ulot

Aniq integral. Nyuton-Leybnits formulasi.

Amaliyotni olib boradi: katt.o'q. B.B.Xidirov

7.7.6. Berilgan integrallarni hisoblang:

1) $\int_{-1}^{2}(x^2+2x+1)dx;$

2) $\int_{0}^{\frac{\pi}{4}}\sin 4x dx;$

3) $\int_{\frac{\pi}{6}}^{\frac{\pi}{2}}\cos x dx;$

4) $\int_{1}^{e}\frac{dx}{x};$

5) $\int_0^{\frac{\pi}{2}} \cos^2 x dx;$

6) $\int_{\frac{\pi}{4}}^{\frac{\pi}{3}} \frac{dx}{\sin^2 x};$

7) $\int_1^2 \frac{dx}{x + x^2};$

8) $\int_0^1 (2x^3 + 1)x^2 dx;$

$$9)\int_0^1 x\sqrt{1+x^2}\,dx;$$

$$10)\int_0^{\frac{\pi}{2}} \cos x \sin^3 x\,dx;$$

$$11)\int_{\frac{\pi}{3}}^{\frac{\pi}{2}} \frac{\sin x dx}{1+\cos x};$$

$$12)\int_{\frac{\sqrt{2}}{3}}^{\frac{\sqrt{3}}{3}} \frac{dx}{\sqrt{4-9x^2}};$$

13) $\int_{\frac{1}{2}}^{\frac{3}{2}} \frac{dx}{3+4x^2};$

14) $\int_{0}^{\frac{\pi}{4}} \sin^3 x dx;$

15) $\int_{0}^{\frac{\pi}{2}} \frac{\cos x dx}{6-5\sin x+\sin^2 x};$

16) $\int_{\frac{\sqrt{2}}{2}}^{1} \frac{\sqrt{1-x^2}}{x^2} dx;$

17) $\int_0^1 \arcsin x dx;$

18) $\int_1^e \ln^2 x dx;$

19) $\int_0^{\pi} x \sin \frac{x}{2} dx;$

20) $\int_0^{\frac{\pi}{4}} e^x \sin 2x dx;$

21) $\int_0^1 x^2 e^{3x} dx;$

22) $\int_1^{\sqrt{e}} x \ln x dx;$

23) $\int_0^{\frac{\pi^2}{4}} \sin \sqrt{x} dx;$

24) $\int_{e^{\frac{\pi}{2}}}^{0} \cos(\ln x) dx.$

E’tiboringiz uchun rahmat!