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## 14 – Amaliy mashg'ulot

# Aniq integral. Nyuton-Leybnits formulasi.

1

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

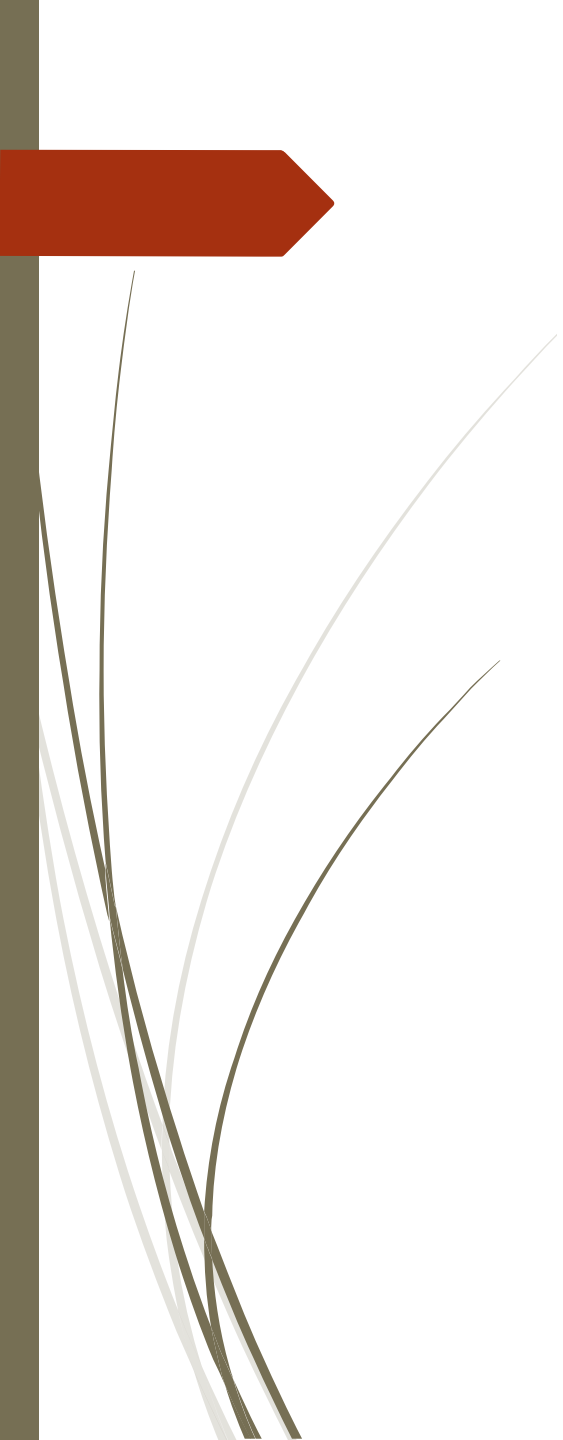
### 7.7.6. Berilgan integrallarni hisoblang:

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

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

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

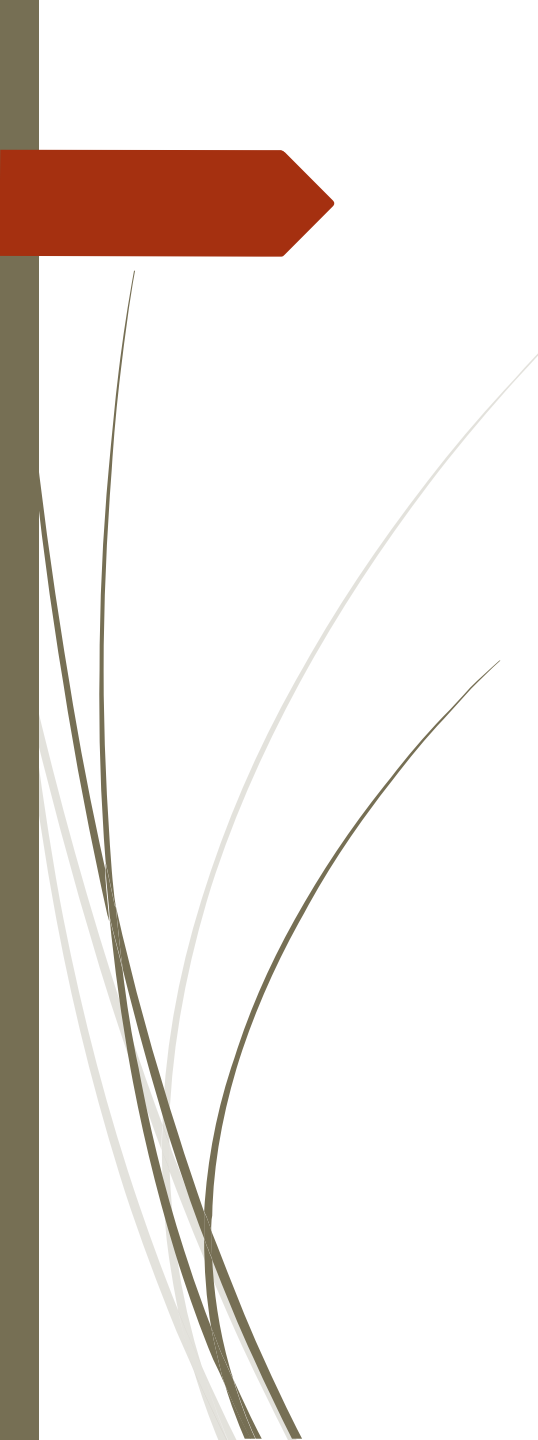
$$4) \int_1^e \frac{dx}{x};$$


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

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

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

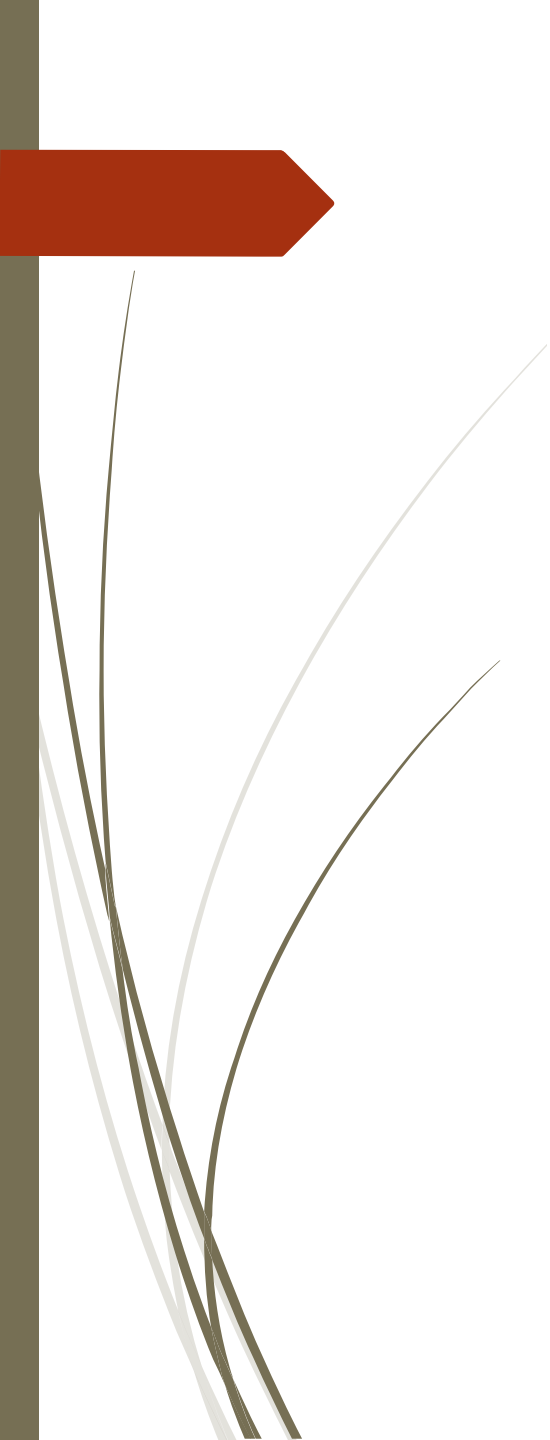
$$8) \int_0^1 (2x^3 + 1)x^2 dx;$$


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

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

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

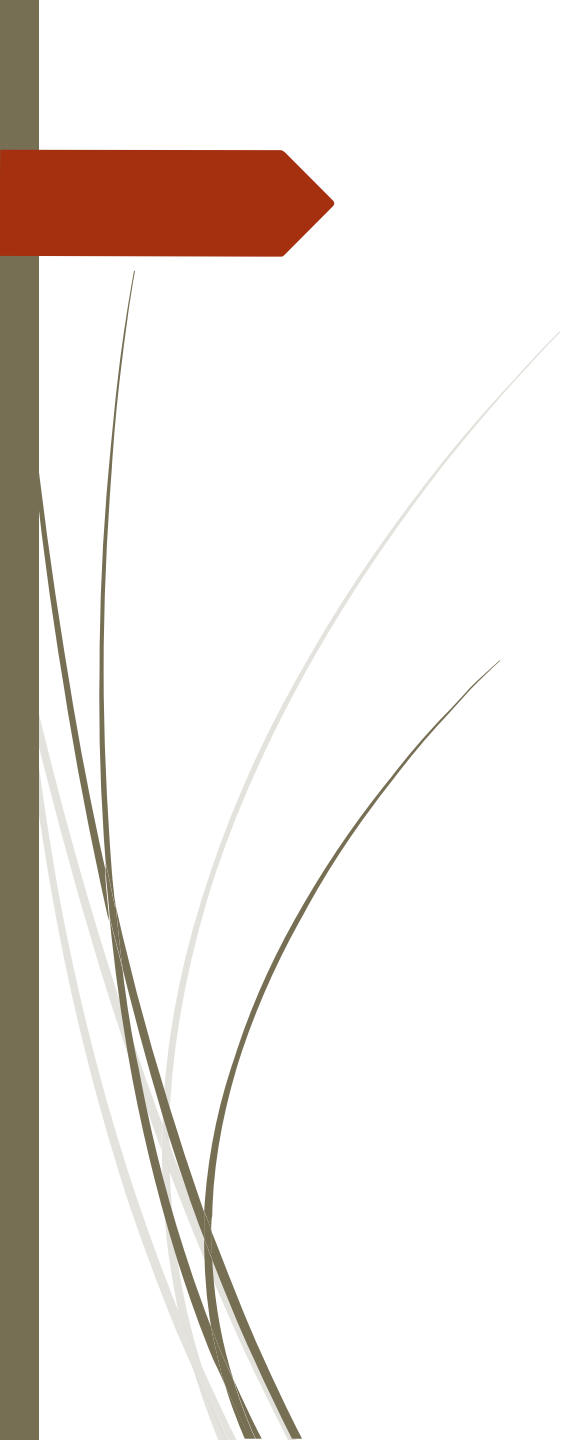
$$12) \int_{\frac{\sqrt{2}}{3}}^{\frac{\sqrt{3}}{3}} \frac{dx}{\sqrt{4-9x^2}};$$


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

$$14) \int_0^{\frac{\pi}{4}} \sin^3 x dx;$$

$$15) \int_0^{\frac{\pi}{2}} \frac{\cos x dx}{6-5\sin x + \sin^2 x};$$


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


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

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

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

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


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

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

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

$$24) \int_0^{e^{\frac{\pi}{2}}} \cos(\ln x) dx.$$



E'tiboringiz uchun rahmat!