

KOFN fanidan na'munaviy savollar bazasi

1. Kompleks o'zgaruvchili funksiyalar. Differensiallashtirish. Integrallashtirish.
2. Analitik davom ettirishlar.
3. Golomorf funksiyalarning asosiy xossalari.
4. Chegirmalar nazariyasi.
5. $\ln z$ funksiya.
6. C^n fazo
7. Kompleks ko'p o'zgaruvchili golomorf funksiyalar, golomorf funksiyalarning sodda xossalari.
8. Kompleks o'zgaruvchili funksiyalar. Differensiallashtirish. Integrallashtirish.
9. Oddiy sohalar.
10. Golomorf funksiyalarning asosiy xossalari.

1. $\operatorname{res}_{z=\infty} e^{\frac{1}{z}}$ hisoblang?

2. $z_0 = 0$ noqat atirpinda Loran qatarina jayin $f(z) = \frac{1}{z-2}$

3. $u = \varphi(x^2 + y^2)$ ko'rinishiga ega bolgan garmonik funksiya topilsin?

4. $\operatorname{res}_{z=\infty} \frac{\sin z}{z^2}$ hisoblang?

5. $u = \varphi\left(\frac{x^2 + y^2}{x}\right)$ ko'rinishiga ega bolgan garmonik funksiya topilsin?

6. $z_0 = 0$ noqat atirpinda Loran qatarina jayin $f(z) = \frac{1}{z(1-z)}$

7. $\operatorname{res}_{z=1} ze^{\frac{1}{z-1}}$ hisoblang?

8. $u = \varphi(xy)$ ko'rinishiga ega bolgan garmonik funksiya topilsin?

9. $z_0 = 0$ noqat atirpinda Loran qatarina jayin $f(z) = \frac{1}{z-2}$

10. $\operatorname{res}_{z=3} \frac{z^3 + 1}{(z+2)^2(z-3)}$ hisoblang?

11. $u = \varphi\left(x + \sqrt{x^2 + y^2}\right)$ ko'rinishiga ega bolgan garmonik funksiya topilsin?

12. $z_0 = 0$ noqat atirpinda Loran qatarina jayin $f(z) = \frac{1}{z(1-z)}$

13. $\operatorname{res}_{z=-2} \frac{z^3 + 1}{(z+2)^2(z-3)}$ hisoblang?

14. $u = \varphi\left(\frac{y}{x}\right)$ ko'rinishiga ega bolgan garmonik funksiya topilsin?

15. $z_0 = 0$ noqat átirpinda Loran qatarina jayín $f(z) = \frac{1}{z-2}$
16. $\operatorname{res}_{z=-2} e^{\frac{1}{z+2}}$ hisoblang?
17. $u = \varphi(x^2 + y^2)$ ko'rinishiga ega bolgan garmonik funksiya topilsin?
18. $z_0 = 0$ noqat átirpinda Loran qatarina jayín $f(z) = \frac{1}{z(1-z)}$
19. $\operatorname{res}_{z=0} \frac{\cos z}{z^3(z+4)}$ hisoblang?
20. $u = \varphi\left(\frac{y}{x}\right)$ ko'rinishiga ega bolgan garmonik funksiya topilsin?
21. $z_0 = 0$ noqat átirpinda Loran qatarina jayín $f(z) = \frac{1}{z-2}$