

«Tasdiqlayman»

«A va MM» kafedrası mudiri

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ALGORITMIK TILLAR VA DASTURLASH 1 FANIDAN YAKUNIY NAZORAT SAVOLLARI

1. Mavzular

1. Sanoq sistemalarida arifmetik amallarga misollar keltiring
2. Berilgan pozitsion sanoq sistemasida qo‘shish va ko‘paytirish jadvallarini quring
3. Algoritm tushunchasiga ta’rif bering va misollar keltiring.
4. C++ da kiritish , chiqarish funksiyalari haqida tushuncha bering
5. C++ tilida o'zgaruvchilarni izohlab misollar keltiring
6. C++ tilida sonli tiplar haqida tushuncha bering va misollar keltiring
7. C++ tilida satrli tiplar haqida tushuncha bering va misollar keltiring
8. c++ da malumotlarni kiritish opertorlarini misollar bilan tushuntirib bering
9. c++ da malumotlarni chiqarish opertorlarini misollar bilan tushuntirib bering
10. c++ da arifmetik amallar
11. C++ tilida standart funksiyalar
12. C++ tilida mantiqiy amallar
13. Tarmoqlanuvchi jarayonlar
14. c++ da shart operatorlari
15. if operatori haqida batafsil tushuncha bering
16. if-else operatori misollar bilan izohlang
17. switch operatori misollar bilan izohlang
18. c++ da mantiqiy ifodalar
19. Takrorlanish operatorlari
20. Sharti oldindan berilgan takrorlanuvchi jarayonlar(while)
21. Sharti ohiridan berilgan takrorlanuvchi jarayonlar(do while)
22. Parametrli takrorlanuvchi jarayonlar(for)
23. C++ da funksiyalar
24. C++ da qiymat qaytaruvchi funksiya
25. C++ da qiymat qaytarmaydigan funksiya(void)
23. C ++ funksiyanı e’lon qilish
25. Bir o’lchamli sonli massivlar
26. Bir o’lchamli sonli massivlarnı e’lon qilish
27. C++ da simvolli o’zgaruvchilar(char tipli)

Algoritmi va dasturini tuzing

a) $10000001110_{(2)}+110111101_{(2)}$; b) $101100011_{(2)}+1110011010_{(2)}$; v) $11011011101_{(2)}+111001001001101_{(2)}$; g) $6575_{(8)}+30634_{(8)}$; d) $346_{(16)}+33FA_{(16)}$.

2. a) $100101000_{(2)}-110011_{(2)}$; b) $1011101100_{(2)}-100000111_{(2)}$; v) $1100111011101_{(2)}-110101101_{(2)}$;
c) $15252_{(10)}-13464_{(10)}$; d) $2028_{(10)}-1008_{(10)}$

3. a) $1001101_{(2)} \times 1110001_{(2)}$; b) $11214_{(8)} \times 110,3_{(8)}$; v) $548_{(10)} \times 4018_{(10)}$.
 $1010011101_{(2)} + 1010110101_{(2)}$; b) $101111001_{(2)} + 1111100000_{(2)}$; v)
 $1101011110001_{(2)} + 111100001011_{(2)}$; r) $103416_{(8)} + 2052_{(8)}$; d) $33C2_{(16)} + 37D4_{(16)}$.
 2. a) $1010100010_{(2)} - 1010010111_{(2)}$; b) $1101111000_{(2)} - 1000101_{(2)}$; v) $110001100011_{(2)} - 110110011_{(2)}$; g) $17333_{(8)} - 3552_{(8)}$; d) $26F4_{(16)} - D36_{(16)}$.
 3. a) $1001111_{(2)} \times 1000100_{(2)}$; b) $10173_{(8)} \times 7344_{(8)}$; v) $562_{(10)} \times 4A4_{(16)}$.

Chiziqli tuzilmalarning algoritmlari va ularning dasturi.

1. Kvadrat diagonali d berilgan, kvadrat tomoni, yuzi va perimetrini hisoblang.
2. ABCD kvadratning ikkita uchi $A(x_1, y_1)$ va $B(x_2, y_2)$ berilgan kvadrat tomoni, perimetri, va yuzini toping.
3. Teng yonli uchburchak perimetri P berilgan, uchburchak tomoni va yuzini toping.
4. Tekislikda uchta nuqta $A(x_1, y_1)$, $B(x_2, y_2)$, $C(x_3, y_3)$ berilgan AB va AC nuqtalar orasidagi masofani toping.
5. To'g'ri burchakli uchburchak katetlari a va b berilgan, uchburchak gipotenuzasini, yuzini va burchaklari sinusini toping.
6. Ikki xonali son berilgan raqamlar yig'indisini toping.
7. Uzunlik a metr b detsimetr va c santimetrda berilgan ularni m , dm va sm da ifodalng. (M: $3m\ 50dm\ 20sm - 8,2m, 82\ dm, 820\ sm$)
8. Uch xonali a son berilgan bu sonning yuzlar, o'nlar va birlar xonasidagi raqamlarini alohida alohida yozing.
9. Kun oshlangandan buyon a sekund vaqt o'tdi bu vaqtni minutda ifodalang va qolgan vaqtni sekundda ifodalang.
10. Uchta a, b, c ikki xonali musbat son berilgan, bu sonlar yig'indisining raqamlari yig'indisi kvadrat ildizini $0,1$ aniqlikda toping.
11. R_1, R_2, R_2 radiuslari haqiqiy son bo'lgan sharlar berilgan bu sharlarni eritib qaytadan radiusi R bo'lgan shar quyildi. R radiusni $0,01$ aniqlikda toping.
12. Uch xonali a son berilgan, bu sonning yuzlar xonasidagi raqamni birlar xonasidagi raqam bilan almashtirib sonni qaytadan yozing.
13. Tomoni haqiqiy son a bo'lgan kvadrat va radiusi haqiqiy son r bo'lgan sharlar eritilib qaytadan tomoni b bo'lgan kub quyildi. Kub tomoni b ni $0,001$ aniqlikda toping.

14. Kommersant a ta kostyumni b so'ndan oldi va bir xil bahoda sotdi natijada c so'm foyda qildi. Kommersant kostumlarni necha so'ndan sotgan.

15. Jo'mrakdan 1 s da 1 milli litr suv tomsa x yilda necha litr suv tomadi.

2-Topshiriq

$$1. Z = \frac{ax}{by^2} + \frac{a}{b^2} + c^3 + \frac{a^2 + 6a^2b^3 + 2c^2}{\sqrt[3]{a^3 + b^3 - 2ab}}$$

$$2. Q = \frac{X \sin^2 y^2 + ab \cos^2 x^3}{by^2} + \frac{a^2 + 2b^2 + 3c^3}{a + 2c^2 + \sqrt[3]{7a}}$$

$$3. y = 2x^2 + b^2 x^3 + \sqrt[3]{a + b^2} - \frac{a^3 + b^3 + 3cd}{\sqrt[5]{2|a-b| + c^2}}$$

$$4. Z = \frac{a + b^3 + c^2}{2abc} + \sin^2 x^3 + (a + b)^{2 \sin^2 x} + b \cos^2 y^3$$

$$5. y = \frac{2a^2 + bc^3 + 2d}{\sqrt[3]{a^3 - b^3} 3abc} - \frac{(a+b)^2 + 2ac^2}{a^2 + \sqrt[3]{b^2} + \ln x}$$

$$6. Q = \frac{2a^2 + b^2 + c^2 + \sqrt[3]{x^2}}{(a-b)^2} - \frac{2x^2 + 7a^2 b^3 + c^2}{a^2 + 8b^3 + c^2}$$

$$7. y = \frac{y^{\sqrt[5]{7,2631}} + x^{\sqrt[3]{71,8672}}}{\sqrt[3]{a} + \sqrt[5]{b}} - \frac{2a + 2b^2}{c^2 + d^2}$$

$$8. y = \frac{a + bx + c^2}{a^2 - b^2} + \frac{\ln x^2 - \ln ax}{2ab + c^2}$$

$$9. Z = \sqrt[5]{\frac{a}{x^2}} + \sqrt[3]{\frac{c^2}{b^2}} - \frac{2ab + c^2}{\sqrt[3]{a+b} - 2ab^2}$$

$$10. Z = \frac{2x^3 + \sqrt[3]{a+x^2}}{a^2 + bc} + \frac{\lg b + \ln c^2}{\cos^2 ax^3}$$

$$11. y = ax^2 + b + \frac{\sin x^2 + c}{\sqrt[3]{a+b^2}}$$

$$12. y = \frac{ax^3 + 7bx^2 + 8c^3}{x^2 + 3a^3} + \frac{a + 2ab + c^2}{\sqrt{a^2 - b^2}}$$

$$13. Q = \frac{ax^2 + \sqrt[3]{bc}}{2ab} + \frac{\sin^2 x + b^3}{\ln ax^2}$$

$$14. Q = \frac{2x^2 + 7a^2 b^3 + c^2}{a^2 + 8b^3 + c^2}$$

$$15. y = \sqrt[3]{a + b^2} - \frac{a^3 + b^3 + 3cd}{\sqrt[5]{2|a-b| + c^2}}$$

3-Topshiriq

$$1. c_1 = \frac{x+y}{y^2 + \frac{|y^2+2|}{x+x^3+5}} + e^{y+2} x - \text{butun, } y - \text{haqiqiy.}$$

$$2. f_1 = \frac{2 \operatorname{tg}(x+\pi 6)}{13 + \cos^2(y+x^2)} + \log_2^{(x^2+2)} x, y - \text{haqiqiy}$$

$$3. f_2 = \frac{1/(x+2/x^2+3/x^3) + e^{x^2+3x}}{\operatorname{arctg}(x+y) + |5+x|^2} - \cos^2(y^2 + x^2 2);$$

$$4. z = \ln \left| (x+y)^2 + \sqrt{|y|+2} - \left(x - \frac{xy}{x^2-5} \right) \right| + \frac{\cos^2(x+y)}{(x+y)^{13}}; x, y - \text{butun}$$

$$5. \quad T_{11} = \frac{x^2+1}{x^2 + \frac{xy+y^2}{y^2 + \frac{y+xy}{|xy|+5}}} + \frac{1}{1+\cos x + \frac{1}{\sin|x|}} \quad x, y - \text{haqiqiy son}$$

$$6. \quad T = \sqrt[5]{a} + \sqrt[4]{b \cdot \frac{ax^2+b}{2 \cdot b+a \cdot b}} \cdot (a^2 + x^2 + b^2 + 2) \quad a, b - \text{haqiqiy, } x - \text{butun son}$$

$$7. \quad F = \left| \frac{\sin^2|cx_2^3+dx_1^3-cd|}{\sqrt{(cx_1^2+dx_2^2+5)+2}} \right| + \text{tg}(x_1 \cdot x_2^2 + d^3); \quad x_1, x_2 - \text{haqiqiy, } s, d - \text{butun.}$$

$$8. \quad y_2 = \frac{ax^2+bx+c}{xa^3+a^2+a^{b-c}} + \cos \left| \frac{ax+b}{cx+d+2c} \right| \quad a, b, c, d - \text{butun, } x - \text{haqiqiy.}$$

$$9. \quad W_1 = 0.75 + \frac{8.2x^2 + \sqrt{|x^3+3x|+\cos(x-2)}}{a^4+b^3+c^2+1} \quad a, b, c - \text{butun, } x - \text{haqiqiy.}$$

$$10. \quad TT = \frac{\sqrt{x-1} + \sqrt{x+2} + \lg(\sqrt{ax^2+2})}{2\sqrt{\sqrt{x+2} + \sqrt{x+24+x^5}}} \quad x - \text{haqiqiy, } a - \text{butun.}$$

$$11. \quad W_2 = \sqrt{e^{xy} - x \cdot \sin(ax) - \frac{x^2+2}{|x|+5}} + \sqrt{\ln(x^2+2)+5} \quad a - \text{butun, } x, y - \text{haqiqiy.}$$

$$12. \quad BB_1 = x \cdot \sin(x/2 + x/3 + x/4) + \frac{\lg(x^2-2)+3^a}{\cos(x+3) \cdot \sin(x+3)+8} \quad a - \text{butun, } x - \text{haqiqiy.}$$

Tarmoqlanuvchi algoritmlar va ularning dasturi.

1. x va y haqiqiy son berilgan. Xisoblang: $\max(x, y)$ va $\min(x, y)$
2. x, y va z haqiqiy son berilgan. Xisoblang: $\max(x, y, z)$ va $\min(x, y, z)$
3. a, b va c haqiqiy son berilgan. Tekshiring: $a < b < c$ tengsizlik bajariladimi?
4. a, b va c haqiqiy son berilgan. Agar $a \geq b \geq c$ tengsizlik bajarilsa, u xolda haqiqiy sonlarni ikkilantiring, aks xolda ularni modullari bilan almashtiring.
5. Ikkita haqiqiy son berilgan. Birinchi sonni chiqaring, agar u ikkinchisidan katta bo'lsa, aks xolda ikkalasini ham chiqaring.
6. Uchta haqiqiy son berilgan. Ulardan $[1, 3]$ intervalga tegishlilarini tanlang.
7. Agar o'zaro farqli x, y, z haqiqiy sonlar birdan kichik bo'lsa, u xolda bu uchta sondan eng kichigini boshqa ikkitasining yarim yig'indisi bilan almashtiring. Aks xolda o'zgarishsiz qoldiring.
8. x, y, z haqiqiy musbat sonlar berilgan. x, y, z uzunlikka ega tomonli uchburchak mavjudmi?
9. N ($0 < N < 10^6$) natural son berilgan uning raqamlar sonini aniqlang.
10. N ($0 < N < 10^6$) natural son berilgan uning raqamlarini alohida-alohida chiqaring.

11. N ($0 < N < 10^6$) natural son berilgan uning raqamlarini teskarisiga yozing.
(M:125–521)
12. a haqiqiy son berilgan, bu sonni musbat yoki manfiy, juft yoki toq ekanligini aniqlang.
13. X butun son beriladi. Agar shu son 4 ga bo'linsa, "4 ga bo'linadi", 3 ga bo'linsa "3 ga bo'linadi", agar 3 ga ham 4 ga ham bo'linsa "3 ham 4 ga ham bo'linadi" deb, aks xolda "3 ga ham 4 ga ham bo'linmaydi" deb ekranga chiqaring.
14. Arab raqamlari bilan berilgan sonni rim raqamlarida ifodalab chiqaruvchi dastur tuzing. Berilgan son 1 dan 10 gacha bo'lgan oraliqda bo'ladi.
15. Arab raqamlari bilan berilgan sonni so'zlar bilan ifodalab chiqaruvchi dastur tuzing. Berilgan son 1 dan 10 gacha bo'lgan oraliqda bo'ladi.

2-topshiriq

$$1 \quad Q = \left\{ \frac{ax^2 + \sqrt[3]{bc}}{2ab}, arapab \neq 0 \right.$$

$$2 \quad y = \left\{ \frac{\sin^2 ax + \cos^3 ax^2}{(a+b)^2 + c}, arapa < 0 \right.$$

$$3 \quad y = \left\{ \frac{a+b^2+2abx}{\sqrt[3]{c^2+b^3}}, arapx > 0 \right.$$

$$4 \quad y = \left\{ \frac{a \sin x + b \cos x^2}{a^2 + b^2}, arapab \neq 0 \right.$$

$$5 \quad Z = \left\{ \frac{2x^3 + ax^2 + c^3}{a^2 - c^2}, arapa > c \right.$$

$$6 \quad y = \left\{ \frac{2c^2 + ab \cos x^2}{a \sin x^2 + b^3}, arapa > 0 \right.$$

$$7 \quad Q = \left\{ \frac{a+b^2+2c^3}{a \cdot \sin^2 x^2}, arapa > |b| \right.$$

$$8 \quad Z = \left\{ \sqrt[3]{cy^2 + a^3} - \ln x, arapx > 0 \right.$$

$$9 \quad y = \left\{ \frac{ax^2 + cx^3}{\sqrt{a^2 - b + c}}, arapa^2 > b \right.$$

$$10 \quad Q = \left\{ \frac{2x + ax^2 + c^3}{a^2 + b^2}, arapx > c \right.$$

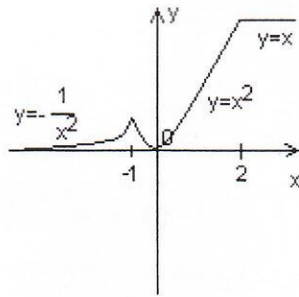
$$11 \quad y = \left\{ \frac{ax^2 + b + 2c^3}{x^2 + g^2}, arapx \neq g \right.$$

$$12 \quad Z = \left\{ \frac{2x^2 + ab^3 + c^2}{2a + c^2}, arapx \neq 0 \right.$$

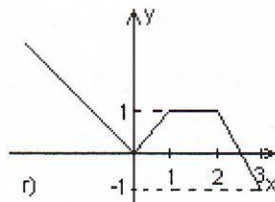
$$U = \left\{ \frac{a^2 + 4abc + c^2}{a - b^2}, arapa > b^2 \right.$$

3-topshiriq

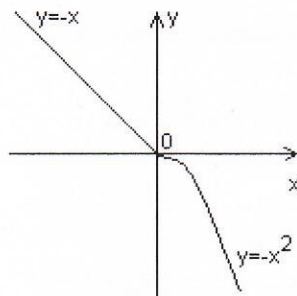
1. a haqiqiy son berilgan. Quydagi rasmlarda tasvirlangan $y(x)$ funktsiya uchun $y(a)$ ni hisoblang.



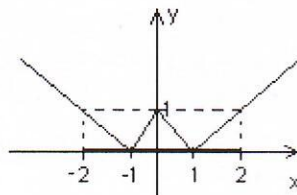
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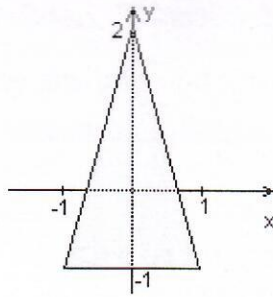
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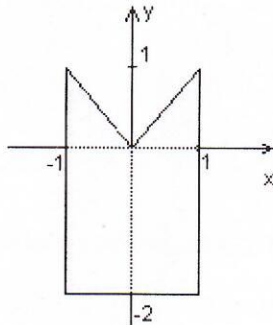
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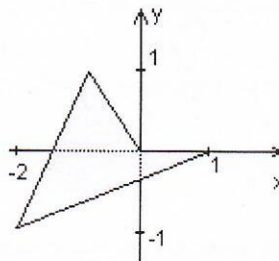
5. x, y haqiqiy sonlar berilgan. Koordinatalari (x, y) bo`lgan nuqta quyida keltirilgan rasmdagi tekislikning shtrixlangan qismiga tegishlimi? (ha/yo`q)



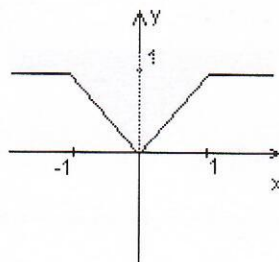
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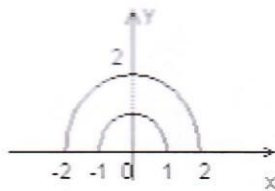
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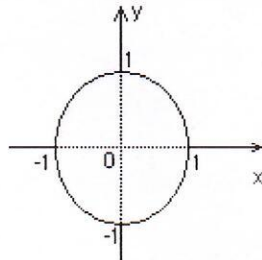
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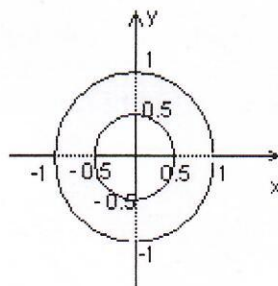
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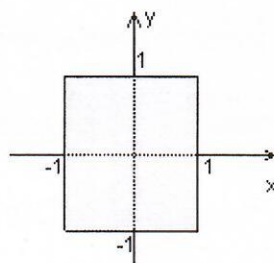
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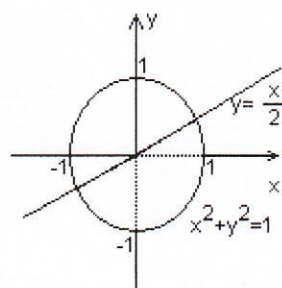
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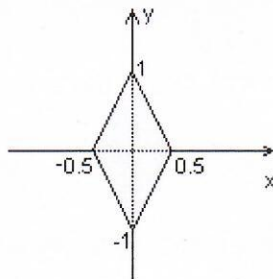
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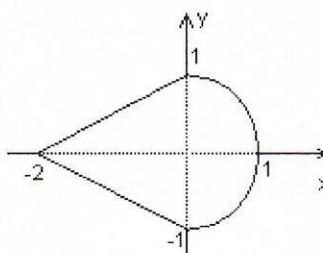
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14. x, y haqiqiy sonlar berilgan. Koordinatalari (x, y) bo'lgan nuqta quyida keltirilgan rasmdagi tekislikning shtrixlangan qismiga tegishlimi? (ha/yo`q)



15. x, y haqiqiy sonlar berilgan. Koordinatalari (x, y) bo'lgan nuqta quyida keltirilgan rasmdagi tekislikning shtrixlangan qismiga tegishlimi? (ha/yo`q)



Sikllarga doir misollar Topshiriqlar

Topshiqnlarni unda ko'rsatilgan sikldan foydalanib yozing.

1-Topshiriq. *while* sikli

$$1. S = \frac{x-1}{1} - \frac{(x-1)^2}{2} + \frac{(x-1)^3}{3} - \frac{(x-1)^4}{4} + \dots + \frac{(-1)^{n-1}(x-1)^n}{n}$$

$$2. P = 1 - \frac{x^2}{1} + \frac{x^4}{2} - \frac{x^6}{3} + \dots + \frac{(-1)^n x^{2n}}{n}$$

$$3. S = 1 - x^2 + x^4 - x^6 + \dots + (-1)^n \cdot x^{2n}$$

$$4. SS = x - \frac{x^2}{2} + \frac{x^3}{3} - \dots + \frac{(-1)^{n-1} x^{2n-1}}{n}$$

$$5. S = x + \frac{x^2}{2} + \frac{x^3}{3} + \dots + \frac{x^{2n-1}}{n}$$

$$6. P = x - \frac{x^3}{3} + \frac{x^5}{5} - \dots + \frac{(-1)^{n+1} x^{2n-1}}{2n-1}$$

$$7. S = x + \frac{x^3}{3} + \frac{x^5}{5} + \dots + \frac{x^{2n-1}}{(2n-1)}$$

$$8. PP = 1 + \frac{1}{1} + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{n}$$

$$9. S = k + \frac{k^2}{2} + \frac{k^3}{3} + \dots + \frac{k^n}{n}$$

$$10. S = 1 + \frac{x^1}{1!} + \frac{x^2}{2!} + \frac{x^3}{3!} + \dots + \frac{x^n}{n!}$$

$$11. S = \frac{x}{1!} + \frac{x}{2!} + \frac{x}{3!} + \dots + \frac{x}{n!}$$

$$12. S = \frac{\pi}{10} + \frac{\pi^3}{10^3} + \frac{\pi^5}{10^5} + \dots + \frac{\pi^{2n+1}}{10^{2n+1}}$$

$$13. S = \frac{\pi}{10} + \frac{\pi}{10^3} + \frac{\pi}{10^5} + \dots + \frac{\pi}{10^{2n-1}}$$

2-Topshiriq. do while sikli

$$1. y = \sqrt[3]{\frac{\sin ax + b^{2c}}{b^2 + \cos^2 x}} - \frac{\sin x^2}{ab}, \quad c \leq x \leq d, n = 25$$

$$2. y = \sqrt[3]{\frac{ax + b}{b^2 + \cos^2 x}} - \frac{\sin x^2}{ab}, \quad a \leq x \leq c, h = 0.3$$

$$3. y = \sqrt[3]{a^a} + x^2 \cos ax, \quad -\frac{\pi}{2} \leq x \leq \pi; h = \frac{\pi}{19}, a = 3.26$$

$$4. y = \frac{a^2 + bx + x^c}{a^2 + b^2 + x^2}, \quad 5 \leq x \leq 10, h = 0.4$$

$$5. y = a^2 \cos x + \frac{\sin x}{2} + bx^2, \quad c \leq x \leq b, h = 0.2$$

$$6. y = \sqrt[3]{\frac{\sin ax + b^{2c}}{b^2 + \cos^2 x}} - \frac{\sin x^2}{ab}, \quad -1 < x < 1, n = 50$$

$$7. y = a^2 + \sqrt[5]{\frac{b + \sin x}{a^3 + \cos^2 x^3}}, \quad 1 \leq a \leq 12; n = 20$$

$$8. y = \frac{ax^2}{b} + \frac{x}{c}, \quad 1 \leq x \leq 10, h = 8, a = 3, b = 12, c = 6$$

$$9. y = a \cos x - \sin x^2, \quad 0 \leq x \leq 10, h = 0.5$$

$$10. y = \sqrt[k]{\frac{ax + b}{b^2 + \cos^2 x}} - \frac{\sin x^2}{ab}, \quad d \leq x \leq c, n = 15$$

$$11. y = \sqrt{\frac{\sin ax + b^{2c}}{b^2 + \cos^2 x}} - \frac{\sin x^2}{ab}, \quad 0 \leq x \leq 1, n = 50$$

$$12. y = \frac{\log a^{2 \sin x} + e^{2x}}{\arctan x + 2}, \quad -\pi \leq x \leq \pi, n = 10$$

$$13. y = \frac{a^b + b^x + c^a}{2x^2 + 3a^{x+c}}, \quad 3 \leq x \leq 5, h = 0.2$$

$$14. y = \frac{ax^2 + bx + 4}{a^2 + b^2 + x^2}, \quad 1 \leq x \leq 20, n = 100$$

$$15. y = 2\sqrt[3]{a^{\sin 2x}} + x^2 \cos ax, \quad -\frac{\pi}{2} \leq x \leq \pi; n = 10$$

3-Topshiriq. for sikli

$$1. S = \frac{\sin 1}{2^1} + \frac{\sin 2}{2^2} + \dots + \frac{\sin n}{2^n}$$

$$2. S = \frac{\sin 1^1}{2^1} - \frac{\sin 2^2}{2^2} + \dots + (-1)^{2n} \frac{\sin n^n}{2^n}$$

$$3. S = \frac{1}{1!} - \frac{1}{3!} + \frac{1}{5!} - \frac{1}{7!} + \dots + (-1)^{n-1} \frac{1}{(2n-1)!}$$

$$4. S = \frac{1}{x^2} - \frac{1}{x^4} + \frac{1}{x^6} - \dots + (-1)^{2n} \frac{1}{x^{2n}}$$

$$5. S = \frac{1}{x^2} + \frac{2}{x^4} + \frac{3}{x^6} + \dots + \frac{n}{x^{2n}}$$

$$6. S = \sin x - \frac{1}{2} \sin 2x + \frac{1}{3} \sin 3x - \frac{1}{4} \sin 4x + \dots + (-1)^{2n} \frac{1}{n} \sin nx$$

$$7. S = \frac{x^1}{\sqrt{1}} + \frac{x^2}{\sqrt{2}} + \dots + \frac{x^n}{\sqrt{n}}$$

$$8. S = 1 + \frac{x^1}{1!} + \frac{x^2}{2!} + \dots + \frac{x^n}{n!}$$

$$9. S = 1 - \frac{x^1}{1!} + \frac{x^2}{2!} - \dots + (-1)^{2n-1} \frac{x^n}{n!}$$

$$10. S = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \dots + \frac{(-1)^{n-1} x^{2n-1}}{(2n-1)!}$$

$$11. S = 1 - \frac{x^2}{2!} + \frac{x^4}{4!} - \frac{x^6}{6!} + \dots + \frac{(-1)^{n-1} x^{2n-2}}{(2n-2)!}$$

$$12. S = 1 + \frac{x^2}{2!} + \frac{x^4}{4!} + \frac{x^6}{6!} + \dots + \frac{x^{2n-2}}{(2n-2)!}$$

$$13. S = x + \frac{x^2}{2} + \frac{x^3}{3} + \dots + \frac{x^{2n-1}}{2n-1}$$

$$14. S = x + \frac{x^3}{3!} + \frac{x^5}{5!} + \dots + \frac{x^{2n-1}}{(2n-1)!}$$

$$15. S = 1 - \frac{k^1}{1!} + \frac{k^2}{2!} - \frac{k^3}{3!} + \dots + \frac{(-1)^{2n-1} k^n}{n!}$$

$$P = \prod_{k=1}^{46} \frac{k}{k^3 + 7k + 5}$$

$$S = \sum_{a=1}^{27} \frac{a^2 + 2a}{a^3 + a \cos^2 a + 1}$$

$$P = \prod_{n=1}^{17} \cos^2 \frac{n + \sqrt{n}}{n - \sqrt[5]{n}}$$

$$P = \prod_{a=10}^{15} \frac{a + b}{\sqrt{a^2 + x^2}}$$

$$P = \sum_{i=1}^{19} \frac{i^4 + i^2 + 3}{\sqrt{i^1 + e^i}}$$

$$S = \sum_{k=1}^{10} \frac{(-1)^k \cdot (k + 1)}{k^3 + k^2 + 1}$$

$$P = \prod_{m=0}^{12} \frac{\sqrt[2]{|m - 5| + 1}}{m^3 + 4m + (-1)^3}$$

$$S = \sum_{a=5}^8 \frac{ax + bc}{a^2 + x}$$

$$S = \sum_{i=10}^{30} \sqrt{(ax + b)^i}$$

$$P = \prod_{a=3}^7 \frac{ax + b}{\sqrt{a^2 + b^2}}$$

$$S = \sum_{a=3}^7 \frac{ax + b}{\sqrt{a + b}}$$

$$P = \prod_{a=3}^6 (ax + \cos^2 ab).$$

$$P = \prod_{a=3}^9 \sqrt[3]{\frac{ax^2 + b}{2 \cdot a}}.$$

$$S = \sum_{i=1}^{81} \frac{i + 2i + 7}{i^2 - 1 + \cos^2 i}.$$

$$P = \prod_{k=1}^{46} \frac{k}{k^3 + 7k + 5}.$$

$$P = \sum_{i=1}^{19} \frac{i^4 + i^2 + 3}{\sqrt{i^1 + e^i}}.$$

$$P = \prod_{m=0}^{12} \frac{\sqrt[2]{|m - 5| + 1}}{m^3 + 4m + (m)^2}.$$

$$S = \sum_{i=1}^{81} \frac{i + 2i + 7}{i^2 - 1 + \cos^2 i}.$$

Bir o'lchamli sonli Massivlar

1. Bir o'lchamli sonli massivni o'rtacha qiymatidan kichik elementlarini o'rtacha qiymati hisoblansin.
2. Bir o'lchamli sonli massivning [a,b] qismidagi elementlari massivni eng kichik elementiga bo'lib chiqilsin.
3. Bir o'lchamli sonli massiv k- elementidan l-elementigacha bo'lgan elementlarining o'rtacha qiymati hisoblansin.
4. Bir o'lchamli sonli massivni eng kichik elementi massivni oxirgi elementi bilan o'rin almashtirilsin.
5. Bir o'lchamli sonli massivning [a,b] qismda yotmaydigan elementlarining o'rtacha qiymati hisoblansin.
6. Bir o'lchamli sonli massivning elementlarini kvadratlarini yigindisi va o'rtacha qiymati hisoblansin.
7. Bir o'lchamli sonli massivni barcha elementlari shu massivni eng katta elementiga bo'lib chiqilsin.
8. Bir o'lchamli sonli massivni barcha elementlari shu massivni eng kichik elementiga bo'lib chiqilsin.
9. Bir o'lchamli sonli massivni M dan kata elementlarini ko'paytmalarini logarifmi hisoblansin.
10. Bir o'lchamli sonli massivni K va M ga teng elementlari ko'paytmasi hisoblansin.
11. Bir o'lchamli sonli massiv M dan katta elementlari yigindisi hisoblansin.
12. Bir o'lchamli sonli massivni toq o'rindagi elementlarini ko'paytmasini juft o'rindagi elementlarini yigindisiga bo'linsin.
13. Bir o'lchamli sonli massiv manfiy elementlarini o'rtacha qiymati

hisoblansin.

14. Bir o'lchamli sonli massiv musbat elementlarini o'rtacha qiymati hisoblansin.
15. Bir o'lchamli sonli massiv toq qiymatli elementlarini o'rtacha qiymati hisoblansin.
16. Bir o'lchamli sonli massiv juft qiymatli elementlarini o'rtacha qiymati hisoblansin.
17. Bir o'lchamli sonli massiv toq o'rindagi elementlarini o'rtacha qiymati hisoblansin.
18. Bir o'lchamli sonli massiv juft o'rindagi elementlarini o'rtacha qiymati hisoblansin.
19. Bir o'lchamli sonli massivni 2 va 5 sonlariga bo'linadigan elementlarini ko'paytmasi topilsin.
20. Bir o'lchamli sonli massivni M dan kichik elementlarini kvadratlarini ko'paytmasi hisoblansin.
21. Bir o'lchamli sonli massivni elementlari massivni eng kata elementini kvadratiga bo'lib chiqilsin.
22. Bir o'lchamli sonli massivning $[a, b]$ kesmadagi elementlarini o'rtacha qiymati hisoblansin.
23. Bir o'lchamli sonli massivni toq o'rindagi elementlarini yigindisi hisoblansin.
24. Bir o'lchamli sonli massivni toq qiymatli elementlarini o'rtacha qiymati hisoblansin.
25. Bir o'lchamli sonli massivning $[a, b]$ kesmada yotmaydigan elementlari soni aniqlansin.
26. Bir o'lchamli sonli massivni M dan keyingi elementlari yigindisini toping.
27. Bir o'lchamli sonli massivni elementlarini kvadratlari yigindisi va o'rtacha qiymati hisoblansin.
28. Bir o'lchamli sonli massivni toq qiymatli elementlarini juft o'rinni elementlari yigindisiga bo'lib chiqilsin.
29. Bir o'lchamli sonli massivning eng katta elementi bilan k -elementi o'rnini almashtirilsin.
30. Bir o'lchamli sonli massivni k -elementidan l -elementigacha bo'lgan elementlarining kublari yigindisi hisoblansin.
31. Bir o'lchamli sonli massivni manfiy elementlari massivni o'rtacha qiymatini logarifmi bilan almashtirilsin.
32. Bir o'lchamli sonli massivning K va M ga teng elementlari yigindisi hisoblansin.
33. Bir o'lchamli sonli massivni manfiy elementlari massivni eng kichik elementini kvadratiga almashtirilsin.
34. Bir o'lchamli sonli massivni 2, 3 va 5 ga bo'linadigan elementlari yigindisi hisoblansin.
35. Bir o'lchamli sonli massivni manfiy elementlarini ko'paytmasi hisoblansin.
36. Bir o'lchamli sonli massivni musbat elementlarini ko'paytmasi hisoblansin.