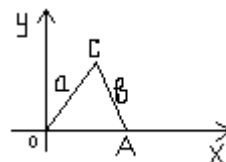


11-sinflar uchun математика test.№1

1. Quyidagilardan qaysi biri noto'g'ri? A) $(f(x)+g(x))'=f'(x)+g'(x)$ B) $c=\text{const } (c \cdot f(x))'=c \cdot f'(x)$ c-ozod son C) $(f(x) \cdot g(x))'=f'(x) \cdot g(x)+f(x) \cdot g'(x)$ D) $(f(x)/g(x))'=(f'(x) \cdot g(x)-f(x) \cdot g'(x))/g^2(x)$
2. $f(x)=1/x$ funksiya grafigiga $x_0=1$ absissali nuqtada o'tkazilgan urinma bilan Ox o'qi orasidagi burchakni toping ? A) $-\pi/4$ B) $\pi/2$ C) $\pi/3$ D) $-\pi/6$
3. Tenglama $[0;5\pi]$ da nechta ildizga ega ? $\text{ctg}x/(1+\sin x)=0$ A) 5 B) 4 C) 3 D) 2
4. Tenglamalar sistemasining 1-tenglamasi $\sin x \cdot \cos y = -1/3$ 2-tenglamasi $\cos x \cdot \sin y = 2/3$ $\text{Ctg}(x-y)=?$ A) 0 B) 1 C) -0.5 D) 0.5
5. Arifmetik progressiyaning dastlabki nechta hadini olmaylik ularning yig'indisi hadlar sonining kvadratining uchlanganiga teng. 7-hadi? A) 25 B) 27 C) 31 D) 39
6. m ning qanday qiymatlarida $(m \cdot x + 9)/x \geq -10$ tengsizlikda x ning eng katta manfiy qiymati -3 ga teng bo'ladi? A) -9 B) -8 C) -7 D) -6
7. e ning $\ln(3x^2-27)$ inchi darajasi kichik 21 dan tengsizlik nechta butun sjnda o'rinli? A) 8 B) 2 C) 6 D) 4
8. Tomonlari 1,2,3,4 bo'lgan to'rtburchakka ichki tashqi aylana chizilgan uning kichik diogonalini toping. A) 2.5 B) $2\sqrt{2}$ C) $\sqrt{140}/\sqrt{11}$ D) $\sqrt{55}/\sqrt{7}$
9. Shar radiusi 6 ga teng. Radius uchidan u bilan 30° burchak tashkil qiluvchi tekislik o'tkazilgan. Shra bilan tekislik hosil qilgan kesimning yuzini toping? A) 27π B) 8π C) 64π D) 25π
10. $y=x\sqrt{3}+2$ va $y=-1/\sqrt{3}x+2$ to'g'ri chiziqlarning kesishishidan hosil bo'lgan burchaklarni toping. A) $75^\circ; 105^\circ$ B) $65^\circ; 115^\circ$ C) $90^\circ; 90^\circ$ D) $60^\circ; 120^\circ$
11. $y=x^2$ parabolda A(2;0.5) nuqtaga eng yaqin nuqtani toping. A) (2;1) B) (1;1) C) (2;3) D) (1;2)
12. y va t uchun $0.09^x(-y^2)-2 \cdot 0.3^x(-y^2) \cdot \cos 2t + 1 = 0$ o'rinli bo'lsa $\sin((3ty)/2)=?$ A) -1/2 B) 1/2 C) 0 D) 1
13. Agar $\cos x = 1/\sqrt{10}$ bo'lsa $(1+\text{tg}^2 x)(1-\sin^2 x) - \sin^2 x$ ni toping. A) 0.1 B) 0.2 C) 0.3 D) $2/\sqrt{3}$
14. ABC uchburchakning AB, CA va BC tomonlarida M, P, N nuqtalar shu tomonlarni 1:2 nisbatda bo'ladi. Agar ABC uchburchak yuzi S bo'lsa, MNP uchburchak yuzi? A) S/2 B) S/3 C) 2S/3 D) 2S/5
15. ABC uchburchakka ichki chizilgan aylanaga o'tkazilgan urinma BC va AC tomonlarni mos ravishta M va N nuqtalarda kesib o'tadi $BC=5$ $AC=6$ $AB=7$ bo'lsa MNC uchburchak perimetri? A) 4 B) 5 C) 3 D) 4.8
16. $(\text{tg} 60^\circ \cdot \cos 15^\circ - \sin 15^\circ) \cdot 7\sqrt{2} = ?$ A) 4 B) 14 C) 30 D) 45
17. Radiusi 15 va 20 ga teng bo'lgan 2 shar markazlari orasidagi masofa 25 ga teng. Shar sirtlari kesishishidan hosil bo'lgan aylana uzunligini toping? A) 27π B) 8π C) 24π D) 25π
18. Muntazam to'rtburchakli prizma asosining tomoni 3, balandligi 4, prizmaning paralell yon yoqlarining o'zaro ayqash dioganallari orasidagi o'tkir burchakni toping ?
19. Tengsizliklar sistemasining 1-tengsizligi $bx \geq 5b-3$ 2-si $bx \leq 4b$. tengsizliklar sistemasi bning qanday qiymatida yechimga ega emas
20. Rasmda $a=4$, $b=3$ va $c=5$ bo'lsa OC to'g'ri chiziqning

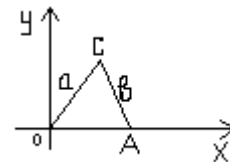


burchak ko'rsatuvchisini toping ?

21. Ushbu $2^x(-x)=2x-x^2-1$ tenglama nechta ildizga ega ?
22. Agar $\lg 2=a$ va $\lg 7=b$ bo'lsa logarifm 35 asosga ko'ra 5ni toping
23. Agar $f(x)=ax^3-6x^2-x$ bo'lsa a ning x ning barcha haqiqiy qiymatlarida $f'(x)<0$ bo'ladigan barcha qiymatlarini toping ?
24. $S=t\sqrt{t}$ qonuniyat bilan harakatlanayotgan moddiy nuqtaning $t=2$ sekunddagi tezlanishini toping ?
25. Qaysi nuqtada $y=x^{1/3}$ funksiyaning grafigi absissa o'qiga 30° burchak ostida joylashgan

11-sinflar uchun математика test. №2

- 1). Shar radiusi 6 ga teng. Radius uchidan u bilan 30° burchak tashkil qiluvchi tekislik o'tkazilgan. Shra bilan tekislik hosil qilgan kesimning yuzini toping?
A) 27π B) 8π C) 64π D) 25π
- 2). $y=x\sqrt{3}+2$ va $y=-1/\sqrt{3}x+2$ to'g'ri chiziqlarning kesishishidan hosil bo'lgan burchaklarni toping. A) $75^\circ; 105^\circ$ B) $65^\circ; 115^\circ$ C) $90^\circ; 90^\circ$ D) $60^\circ; 120^\circ$
- 3). $y=x^2$ parabola A(2;0.5) nuqtaga eng yaqin nuqtani toping. A) (2;1) B) (1;1) C) (2;3) D) (1;2)
- 4). y va t uchun $0.09^{(-y^2)} - 2 \cdot 0.3^{(-y^2)} \cdot \cos 2t + 1 = 0$ o'rinli bo'lsa $\sin((3ty)/2) = ?$ A) $-1/2$ B) $1/2$ C) 0 D) 1
- 5). Agar $\cos x = 1/\sqrt{10}$ bo'lsa $(1 + \tan^2 x)(1 - \sin^2 x) - \sin^2 x$ ni toping. A) 0.1 B) 0.2 C) 0.3 D) $2/\sqrt{3}$
- 6). ABC uchburchakning AB, CA va BC tomonlarida M, P, N nuqtalar shu tomonlarni 1:2 nisbatda bo'ladi. Agar ABC uchburchak yuzi S bo'lsa, MNP uchburchak yuzi?
A) $S/2$ B) $S/3$ C) $2S/3$ D) $2S/5$
- 7). ABC uchburchakka ichki chizilgan aylanaga o'tkazilgan urinma BC va AC tomonlarni mos ravishta M va N nuqtalarda kesib o'tadi $BC=5$ $AC=6$ $AB=7$ bo'lsa MNC uchburchak perimetri? A) 4 B) 5 C) 3 D) 4.8
- 8). $(\tan 60^\circ \cdot \cos 15^\circ - \sin 15^\circ) \cdot 7\sqrt{2} = ?$
A) 4 B) 14 C) 30 D) 45
- 9). Radiusi 15 va 20 ga teng bo'lgan 2 shar markazlari orasidagi masofa 25 ga teng. Shar sirtlari kesishishidan hosil bo'lgan aylana uzunligini toping?
A) 27π B) 8π C) 24π D) 25π
- 10). Quyidagilardan qaysi biri noto'g'ri? A) $(f(x) + g(x))' = f'(x) + g'(x)$ B) $c = \text{const} (c \cdot f(x))' = c' \cdot f'(x)$ c-ozod son C) $(f(x) \cdot g(x))' = f'(x) \cdot g(x) + f(x) \cdot g'(x)$ D) $(f(x)/g(x))' = (f'(x) \cdot g(x) - f(x) \cdot g'(x))/g^2(x)$
- 11). $f(x) = 1/x$ funksiya grafigiga $x_0 = 1$ absissali nuqtada o'tkazilgan urinma bilan Ox o'qi orasidagi burchakni toping? A) $-\pi/4$ B) $\pi/2$ C) $\pi/3$ D) $-\pi/6$
- 12). Tenglama $[0; 5\pi]$ da nechta ildizga ega? $\text{ctg} x / (1 + \sin x) = 0$ A) 5 B) 4 C) 3 D) 2
- 13). Tenglamalar sistemasining 1-tenglamasi $\sin x \cdot \cos y = -1/3$ 2-tenglamasi $\cos x \cdot \sin y = 2/3$ $\text{Ctg}(x-y) = ?$ A) 0 B) 1 C) -0.5 D) 0.5
- 14). Arifmetik progressiyaning dastlabki nechta hadini olmaylik ularning yig'indisi hadlar sonining kvadratining uchlanganiga teng. 7-hadi? A) 25 B) 27 C) 31 D) 39
- 15). m ning qanday qiymatlarida $(m \cdot x + 9)/x \geq -10$ tengsizlikda x ning eng katta manfiy qiymati -3 ga teng bo'ladi? A) -9 B) -8 C) -7 D) -6
- 16). e ning $\ln(3x^2 - 27)$ inchi darajasi kichik 21 dan tengsizlik nechta butun sında o'rinli?
A) 8 B) 2 C) 6 D) 4
- 17). Tomonlari 1,2,3,4 bo'lgan to'rtburchakka ichki tashqi aylana chizilgan uning kichik dioganalini toping.
A) 2.5 B) $2\sqrt{2}$ C) $\sqrt{140}/\sqrt{11}$ D) $\sqrt{55}/\sqrt{7}$
- 18). Muntazam to'rtburchakli prizma asosining tomoni 3, balandligi 4, prizmaning paralell yon yoqlarining o'zaro ayqash dioganallari orasidagi o'tkir burchakni toping?
- 19). Tengsizliklar sistemasining 1-tengsizligi $bx \geq 5b - 3$ 2-si $bx \leq 4b$. tengsizliklar sistemasi bning qanday qiymatida yechimga ega emas
- 20). Rasmda $a=4$, $b=3$ va $c=5$ bo'lsa OC to'g'ri chiziqning

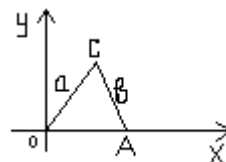


burchak ko'rsatishini toping?

- 21). Ushbu $2^{(-x)} = 2x - x^2 - 1$ tenglama nechta ildizga ega?
- 22). Agar $\lg 2 = a$ va $\lg 7 = b$ bo'lsa logarifm 35 asosga ko'ra 5ni toping
- 23). Agar $f(x) = ax^3 - 6x^2 - x$ bo'lsa a ning x ning barcha haqiqiy qiymatlarida $f'(x) < 0$ bo'ladigan barcha qiymatlarini toping?
- 24). $S = t\sqrt{t}$ qonuniyat bilan harakatlanayotgan moddiy nuqtaning $t=2$ sekunddagi tezlanishini toping?
- 25). Qaysi nuqtada $y = x^{1/3}$ funksiyaning grafigi absissa o'qiga 30° burchak ostida joylashgan

11-sinflar uchun математика test. №3

- 1). ABC uchburchakning AB, CA va BC tomonlarida M, P, N nuqtalar shu tomonlarni 1:2 nisbatda bo'radi. Agar ABC uchburchak yuzi S bo'lsa, MNP uchburchak yuzi?
A) $S/2$ B) $S/3$ C) $2S/3$ D) $2S/5$
- 2). ABC uchburchakka ichki chizilgan aylanaga o'tkazilgan urinma BC va AC tomonlarni mos ravishta M va N nuqtalarda kesib o'tadi $BC=5$ $AC=6$ $AB=7$ bo'lsa MNC uchburchak perimetri? A) 4 B) 5 C) 3 D) 4.8
- 3). $(\operatorname{tg}60^\circ \cdot \cos15^\circ - \sin15^\circ) \cdot 7\sqrt{2} = ?$
A) 4 B) 14 C) 30 D) 45
- 4). Radiusi 15 va 20 ga teng bo'lgan 2 shar markazlari orasidagi masofa 25 ga teng. Shar sirtlari kesishishidan hosil bo'lgan aylana uzunligini toping?
A) 27π B) 8π C) 24π D) 25π
- 5). Quyidagilardan qaysi biri noto'g'ri? A) $(f(x)+g(x))' = f'(x)+g'(x)$ B) $c = \text{const}$ $(c \cdot f(x))' = c' \cdot f'(x)$ c-ozod son C) $(f(x) \cdot g(x))' = f'(x) \cdot g(x) + f(x) \cdot g'(x)$ D) $(f(x)/g(x))' = (f'(x) \cdot g(x) - f(x) \cdot g'(x))/g^2(x)$
- 6). $f(x) = 1/x$ funksiya grafigiga $x_0 = 1$ absissali nuqtada o'tkazilgan urinma bilan Ox o'qi orasidagi burchakni toping? A) $-\pi/4$ B) $\pi/2$ C) $\pi/3$ D) $-\pi/6$
- 7). Tenglama $[0; 5\pi]$ da nechta ildizga ega? $\operatorname{ctg}x/(1+\sin x) = 0$ A) 5 B) 4 C) 3 D) 2
- 8). Tenglamalar sistemasining 1-tenglamasi $\sin x \cdot \cos y = -1/3$ 2-tenglamasi $\cos x \cdot \sin y = 2/3$ $\operatorname{Ctg}(x-y) = ?$ A) 0 B) 1 C) -0.5 D) 0.5
- 9). Arifmetik progressiyaning dastlabki nechta hadini olmaylik ularning yig'indisi hadlar sonining kvadratining uchlanganiga teng. 7-hadi? A) 25 B) 27 C) 31 D) 39
- 10). m ning qanday qiymatlarida $(m \cdot x + 9)/x \geq -10$ tengsizlikda x ning eng katta manfiy qiymati -3 ga teng bo'ladi? A) -9 B) -8 C) -7 D) -6
- 11). e ning $\ln(3x^2 - 27)$ inchi darajasi kichik 21 dan tengsizlik nechta butun sonda o'rinli?
A) 8 B) 2 C) 6 D) 4
- 12). Tomonlari 1, 2, 3, 4 bo'lgan to'rtburchakka ichki tashqi aylana chizilgan uning kichik diogonalini toping.
A) 2.5 B) $2\sqrt{2}$ C) $\sqrt{140}/\sqrt{11}$ D) $\sqrt{55}/\sqrt{7}$
- 13). Shar radiusi 6 ga teng. Radius uchidan u bilan 30° burchak tashkil qiluvchi tekislik o'tkazilgan. Shra bilan tekislik hosil qilgan kesimning yuzini toping?
A) 27π B) 8π C) 64π D) 25π
- 14). $y = x\sqrt{3} + 2$ va $y = -1/\sqrt{3}x + 2$ to'g'ri chiziqlarning kesishishidan hosil bo'lgan burchaklarni toping. A) $75^\circ; 105^\circ$ B) $65^\circ; 115^\circ$ C) $90^\circ; 90^\circ$ D) $60^\circ; 120^\circ$
- 15). $y = x^2$ parabola A(2; 0.5) nuqtaga eng yaqin nuqtani toping. A) (2; 1) B) (1; 1) C) (2; 3) D) (1; 2)
- 16). y va t uchun $0.09^{(-y^2)} - 2 \cdot 0.3^{(-y^2)} \cdot \cos 2t + 1 = 0$ o'rinli bo'lsa $\sin((3t)/2) = ?$ A) -1/2 B) 1/2 C) 0 D) 1
- 17). Agar $\cos x = 1/\sqrt{10}$ bo'lsa $(1 + \operatorname{tg}^2 x)(1 - \sin^2 x) - \sin^2 x$ ni toping. A) 0.1 B) 0.2 C) 0.3 D) $2/\sqrt{3}$
- 18). Muntazam to'rtburchakli prizma asosining tomoni 3, balandligi 4, prizmaning paralell yon yoqlarining o'zaro ayqash dioganallari orasidagi o'tkir burchakni toping?
- 19). Tengsizliklar sistemasining 1-tengsizligi $bx \geq 5b - 3$ 2-si $bx \leq 4b$. tengsizliklar sistemasi bning qanday qiymatida yechimga ega emas
- 20). Rasmda $a=4$, $b=3$ va $c=5$ bo'lsa OC to'g'ri chiziqning



burchak ko'rsatkichini toping?

- 21). Ushbu $2^{\ln(-x)} = 2x - x^2 - 1$ tenglama nechta ildizga ega?
- 22). Agar $\lg 2 = a$ va $\lg 7 = b$ bo'lsa logarifm 35 asosga ko'ra 5ni toping
- 23). Agar $f(x) = ax^3 - 6x^2 - x$ bo'lsa a ning x ning barcha haqiqiy qiymatlarida $f'(x) < 0$ bo'ladigan barcha qiymatlarini toping?
- 24). $S = t\sqrt{t}$ qonuniyat bilan harakatlanayotgan moddiy nuqtaning $t=2$ sekunddagi tezlanishini toping?
- 25). Qaysi nuqtada $y = x^{1/3}$ funksiyaning grafigi absissa o'qiga 30° burchak ostida joylashgan

(1-variant)

- | | | | | |
|------|-------|--------------------|-----------------------|---|
| 1. B | | | | |
| 2. A | 8. D | 14. B | 20. $\frac{3}{4}$ | 25. $(\frac{1}{27}^{\frac{1}{4}}; \frac{1}{3}^{\frac{1}{4}})$ |
| 3. C | 9. A | 15. A | 21. yechimga ega emas | |
| 4. A | 10. C | 16. B | 22. $(1-a)/(1+b-a)$ | |
| 5. D | 11. B | 17. C | 23. $a < -12$ | |
| 6. C | 12. C | 18. $\arcsin 0.96$ | 24. $3\sqrt[3]{2/8}$ | |
| 7. B | 13. A | 19. $(3; \infty)$ | | |

TEST KALITLARI

(II-variant)

- | | | | |
|-----|------|--------------------|---|
| 1.A | 8.B | 15.C | 21.yechimga ega |
| 2.C | 9.C | 16.B | emas |
| 3.B | 10.B | 17.D | 22. $(1-a)/(1+b-a)$ |
| 4.C | 11.A | 18. $\arcsin 0.96$ | 23. $a < -12$ |
| 5.A | 12.C | 19. $(3; \infty)$ | 24. $3\sqrt[3]{2/8}$ |
| 6.B | 13.A | 20. $\frac{3}{4}$ | 25. $(\frac{1}{27}^{\frac{1}{4}}; \frac{1}{3}^{\frac{1}{4}})$ |
| 7.A | 14.D | | |

TEST KALITLARI

(III-variant)



- 1.B
- 2.A
- 3.B
- 4.C
- 5.B
- 6.A
- 7.C
- 8.A
- 9.D
- 10.C
- 11.B
- 12.D
- 13.A
- 14.C
- 15.B
- 16.C
- 17.A
- 18. $\arcsin 0.96$
- 19. $(3; \infty)$
- 20 $\frac{3}{4}$ 21.yechimga ega emas
- 22. $(1-a)/(1+b-a)$
- 23. $a < -12$
- 24. $3\sqrt{2}/8$
- 25. $(1/27^{1/4}; 1/3^{1/4})$

bellashuv.uz