

O‘zbekiston Respublikasi
Maktabgacha va maktab ta’limi vazirligi huzuridagi
Ixtisoslashtirilgan ta’lim muassasalari agentligi
2022-2023 o‘quv yili III-chorak
Ixtisoslik fanlaridan choraklik summativ
baholash test savollari.
(aniq fanlar yo‘nalishi)
10-sinf
II VARIANT

1-12 algebra, 13-20 geometriya, 21-35 fizika, 36-50 ingliz tili.
 (B-bilish; Q-qo‘llash; M-mulohazaga oid test savollari)

O‘quvchi (F.I.SH).....

1. (B 2,5 ball) Funksiyaning aniqlanish sohasini toping: $y = \frac{1}{x-3} + \sqrt{x-2}$
 A) $x \in [2; 3)$ B) $x \in [2; \infty)$ C) $x \in (1; \infty)$ D) $x \in [2; 3) \cup (3; \infty)$
2. (B 2,5 ball) Jadvaldan foydalanib to‘g‘ri javobni belgilang.

Funksiyalarga doir	Doim to‘g‘ri(D)	Ba‘zan to‘g‘ri(B)	Hech qachon to‘g‘ri emas(H)
I.Noldan farqli toq funksiyalarning yig‘indisi toq funksiya bo‘ladi.			
II.Juft funksiyalarning ixtiyoriy natural toq darajasi juft bo‘ladi.			
III.Noldan farqli juft va toq funksiyalarning ayirmasi juft funksiya bo‘ladi.			
IV. Davriy funksiyalarning ayirmasi, daviy funksiya bo‘ladi.			

- A) I-B, II-B, III-B, IV-H B) I-D, II-D, III-B, IV-B
 C) I-B, II-B, III-H, IV-H D) I-D, II-D, III-H, IV-B

3. (B 2,5 ball) Tenglamani yeching: Bu yerda $x = [x] + \{x\}$ tenglik o‘rinli. $\{3x - 6\} = 0,36$
 A) $x = \frac{6,36+n}{6}, n \in \mathbb{Z}$ B) $x = \frac{3,36+n}{3}, n \in \mathbb{Z}$ C) $x = \frac{6,36+n}{3}, n \in \mathbb{Z}$ D) \emptyset
4. (Q 3,5 ball) Funksiyaning eng kichik qiymatini toping: $y = \frac{x^2-5x+16}{x-5}, (x > 5)$
 A) 10 B) 13 C) 11 D) 12

5. (Q 3,5 ball) Nechta tub son tenglamani qanoatlartiradi. Bu yerda $x = [x] + \{x\}$ tenglik o‘rinli.

$$\left[\frac{x}{7} - 1\right] = 2 \quad \text{A) 1 ta} \quad \text{B) 2 ta} \quad \text{C) 3 ta} \quad \text{D) 4 ta}$$

6. (Q 3,5 ball) Ushbu $\begin{cases} x - 2 = 7\cos\alpha \\ y - 7\sin\alpha = -4 \end{cases} \quad 0 \leq \alpha \leq 2\pi$ parametrik ko‘rinishda berilgan funktsiyani toping.

$$\begin{aligned} \text{A)} (x+2)^2 + (y+4)^2 &= 49 & \text{B)} (x+2)^2 + (y-4)^2 &= 49 \\ \text{C)} (x-2)^2 + (y+4)^2 &= 49 & \text{D)} (x-2)^2 + (y-4)^2 &= 49 \end{aligned}$$

7. (Q 3,5 ball) Tengsizlik har doim o‘rinli bo‘ladigan a ning eng kichik musbat qiymatini toping.

$$3\cos x + 2 \leq a \quad \text{A) 4} \quad \text{B) 6} \quad \text{C) 5} \quad \text{D) 7}$$

8. (Q 3,5 ball) Tenglamani yeching: $4\sin^2 3x = 3$

$$\begin{aligned} \text{A)} x &= (-1)^n \frac{\pi}{9} + \frac{\pi n}{3}, \quad n \in \mathbb{Z} & \text{B)} x &= \pm \frac{\pi}{18} + \frac{\pi n}{3}, \quad n \in \mathbb{Z} \\ \text{C)} x &= \pm \frac{\pi}{9} + \frac{\pi n}{3}, \quad n \in \mathbb{Z} & \text{D)} x &= \pm \frac{\pi}{9} + \frac{2\pi n}{3}, \quad n \in \mathbb{Z} \end{aligned}$$

9. (Q 3,5 ball) Ushbu $\sin 2x + \sin 4x = 0$ tenglama $[0; 2\pi]$ oraliqda nechta ildizga ega?

$$\text{A) } \emptyset \quad \text{B) 7} \quad \text{C) 4} \quad \text{D) 8}$$

10. (Q 3,5 ball) Tengsizlikni yeching: $\sqrt{3}\cos x < \sin x$

$$\begin{aligned} \text{A)} \left(\frac{\pi}{3} + 2\pi k; \frac{4\pi}{3} + 2\pi k\right), \quad k \in \mathbb{Z} & \quad \text{B)} \left(\frac{\pi}{3} + \pi k; \frac{4\pi}{3} + \pi k\right), \quad k \in \mathbb{Z} \\ \text{C)} \left(\frac{\pi}{6} + 2\pi k; \frac{5\pi}{6} + 2\pi k\right), \quad k \in \mathbb{Z} & \quad \text{D)} \left(\frac{\pi}{6} + \pi k; \frac{5\pi}{6} + \pi k\right), \quad k \in \mathbb{Z} \end{aligned}$$

11. (Q 3,5 ball) Funktsional tenglamadan $f(x)$ ni toping. $2f(1-x) + 3 = xf(x)$

$$\text{A)} f(x) = \frac{3x-9}{x^2-x-4} \quad \text{B)} f(x) = \frac{3x+9}{x^2-x+4} \quad \text{C)} f(x) = \frac{3x-9}{x^2-x+4} \quad \text{D)} f(x) = \frac{3x+9}{x^2+x+4}$$

12. (Q 4,5 ball) Ushbu $y = f(x)$ funktsiya barcha haqiqiy sonlar to‘plamida aniqlangan davriy funktsiya bo‘lib, uning davri 3 ga va $f(1) = 7$ bo‘lsa, $7f(13) - 5f(-5)$ ni toping.

$$\text{A) 16} \quad \text{B) 14} \quad \text{C) 10} \quad \text{D) 18}$$

13. (B 4,5 ball) O‘nikkiburchakli prizmada nechta diogonal tekislik o‘tkazish mumkin.

$$\text{A) 108} \quad \text{B) 54} \quad \text{C) 56} \quad \text{D) 66}$$

14. (B 4,5 ball) A, B, C, D, E, F, H variantlardan quyidagi I, II, III, IV savollarning har biriga bittadan bo‘lgan to‘g‘ri javob variantini mos qo‘ying.

Ko‘pyoqlar va ularga doir	Javoblar
I. Qirralari soni 30 ta bo‘lgan piramidaning uchlari sonini toping.	A)18
II. Yoqlari soni 18 ta bo‘lgan prizmaning uchlari sonini toping.	B)25
III. Ko‘pyoqning har bir uchida bir xil sondagi 3 ta qirra uchrashadi, uning qirralari soni 27 ta bo‘lsa, uchlari sonini toping.	C)32
IV. Ko‘pyoqning barcha yoqlari bir xil sondagi to‘rtburchaklardan iborat. Agar uning qirralari soni 24 ta bo‘lsa, yoqlari sonini toping.	D)16
	E)15
	F)14
	H)12

$$\begin{aligned} \text{A) I-D, II-C, III-A, IV-H} & \quad \text{B) I-D, II-F, III-F, IV-B} \\ \text{C) I-E, II-D, III-C, IV-H} & \quad \text{D) I-D, II-C, III-A, IV-F} \end{aligned}$$

15. (Q 5 ball) Muntazam to‘rtburchakli kesik piramidaning asoslarining tomonlari 14 cm va 10 cm, balandligi 6 cm. Kesik piramidaning diagonalini necha cm?

$$\text{A) 17 cm} \quad \text{B) 18 cm} \quad \text{C) 16 cm} \quad \text{D) 15 cm}$$

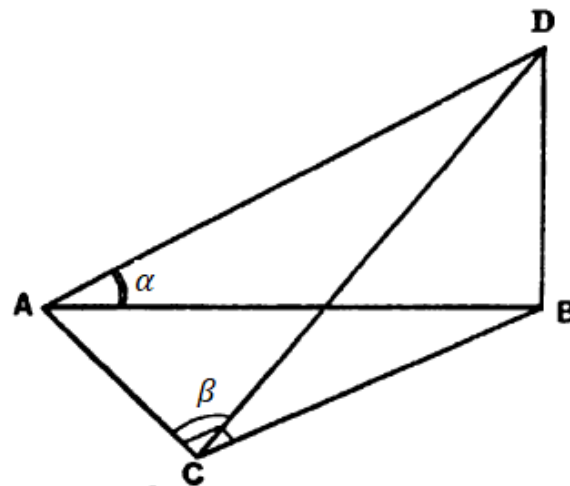
16. (Q 5 ball) Muntazam oltiburchakli piramidaning apofemasi 5 cm, balandligi 4 cm bo‘lsa, uning yon sirtini yuzini toping. $\text{A) } 30\sqrt{2} \text{ cm}^2 \quad \text{B) } 30\sqrt{3} \text{ cm}^2 \quad \text{C) } 35\sqrt{2} \text{ cm}^2 \quad \text{D) } 37\sqrt{3} \text{ cm}^2$

17. (Q 5 ball) Qirradi 6 dm ga teng bo‘lgan kubning ustki asosining markazi quyi asosning uchlari orqali tutashtirilgan. Hosil bo‘lgan piramidaning yon sirtini toping.

$$\text{A) } 36\sqrt{5} \text{ dm}^2 \quad \text{B) } 18\sqrt{5} \text{ dm}^2 \quad \text{C) } 48\sqrt{3} \text{ dm}^2 \quad \text{D) } 36\sqrt{3} \text{ dm}^2$$

18. (Q 5 ball) Chizmada tekislikda ABC to'g'ri burchakli uchburchak berilgan. Agar $\angle DAB = \alpha$, $\angle ACD = \beta$, $\angle ACB = 90^\circ$, $BD \perp (ABC)$ va $DB = AB$ bo'lsa, $\alpha + \beta$ ni toping.

- A) 155° B) 120°
C) 135° D) 125°

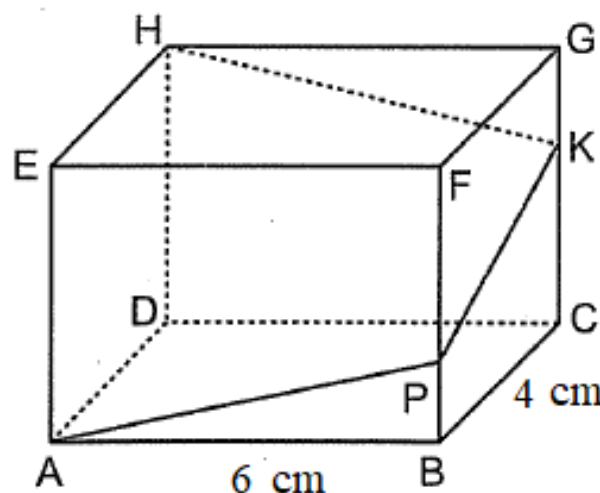


19. (Q 5 ball)). To'rtburchakli muntazam prizma asosining yuzi Q ga teng. Uning yoqlarining diagonallari nisbati 1: 3 kabi. Shu prizmaning yon sirti yuzini toping.

- A) $4\sqrt{17}Q$ B) $4\sqrt{15}Q$ C) $2\sqrt{17}Q$ D) $2\sqrt{15}Q$

20. (M 6 ball) To'g'ri burchakli parallelepipedda $AB = 6\text{ cm}$, $BC = 4\text{ cm}$ va $|AP| + |PK| + |KH|$ yig'indining eng qisqa uzunligi 20 cm bo'lsa, uning to'la sirtini toping.

- A) 286 cm^2 B) 288 cm^2
C) 144 cm^2 D) 244 cm^2



21. (B 2 ball) Jumlaning mazmuniga mos ravishda gapni davom ettiring:

Tebranayotgan jism kinetik energiyasi ...

- A) muvozanat vaziyatidan o'tishda eng katta qiymatga erishadi
B) muvozanat vaziyatidan o'tishda eng kichik qiymatga erishadi
C) tebranish davomida o'zgarmay qoladi
D) eng katta siljish vaziyatida eng katta qiymatga erishadi

22. (B 2 ball) Tovush yuksakligi (balandligi) uning qaysi parametriga bog'liq?

- A) tezlik B) to'lqin uzunligi C) amplituda D) chastota

23. (B 2 ball) Temperaturaning fizik ma'nosi nima?

- A) molekullar o'rtacha kinetik energiyasining o'lchovi
B) molekullarning vaqt birligidagi to'qnashishlar sonining o'lchovi
C) modda agregat holatining tavsifnomasi
D) gaz bajaradigan ishning o'lchovi

24. (B 2 ball) Moddaga tegishli bo'lgan kritik temperaturadan yuqori temperaturalarda u qanday agregat holatda bo'ladi?

- A) gaz va suyuq B) qattiq C) to'yingan bug' D) gaz