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)
11-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) Aniq integralni hisoblang: $\int_0^1 (x^2 + 4x - 2)dx$

A) $-\frac{1}{3}$ B) 3 C) $\frac{1}{3}$ D) -3

2. (B 2,5 ball) Aniq integralni hisoblang: $\int_e^{e^2} \frac{1}{xlnx} dx$

A) $ln4$ B) $ln2$ C) $ln3$ D) 1

3. (B 2,5 ball) Aniq integralni hisoblang: $\int_0^{\frac{\pi}{2}} \frac{dx}{5-3cosx}$

A) $\frac{1}{2}arctg2$ B) $2arctg\frac{1}{2}$ C) $arctg2$ D) $arctg\frac{1}{2}$

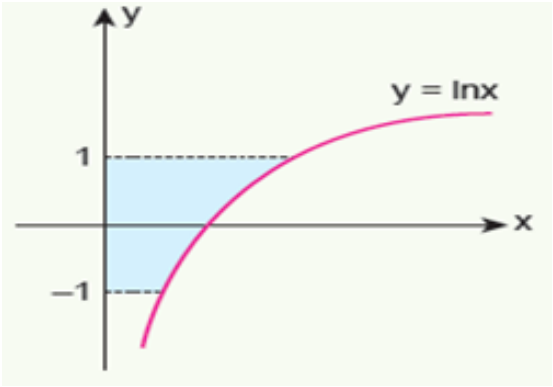
4. (Q 3,5 ball) Agar $y(1) = \frac{1}{2}$ bo‘lsa, $xy' + y = y^2$ differensial tenglamani yeching.

A) $y = \frac{1}{1+x}$ B) $y = \frac{1}{x} - 0{,}5$ C) $y = x - 0{,}5$ D) $y = \frac{1}{2x}$

5. (Q 3,5 ball) Agar $y(2) = 1$ bo‘lsa, $\frac{y}{y'} = lny$ differensial tenglamani yeching.

A) $y = e^{\sqrt{2x+2}}$ B) $y = e^{\sqrt{2x-4}}$ C) $y = e^{\sqrt{x-4}}$ D) $y = e^{\sqrt{2x}} + 1$

6. (Q 3,5 ball) Ushbu chizmada $y = lnx$ funksiya grafigi, $y = -1$ va $y = 1$ chiziqlar bilan chegaralangan sohani yuzi necha birlik kvadrat.



A) $\frac{e^2-2}{e}$ B) $\frac{e^2-1}{e}$

C) $\frac{e^2+1}{e}$ D) $\frac{e^2+2}{e}$

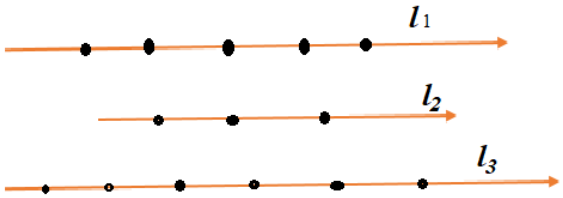
7. (Q 3,5 ball) Ikki jism to‘g‘ri chiziq bo‘ylab bir vaqtning o‘zida bitta nuqtadan bir yo‘nalishda $v_1(t) = 3t^2 - 5\ (m/c)$ va $v_2(t) = 3t^2 + 2t + 1\ (m/c)$ qonuniyatlarga ko‘ra harakatlana boshladi. Harakat boshlangandan 4 sekund o‘tgach, bu jismlar orasidagi masofa (m) qanchaga teng bo‘ladi?

A) 38 B) 42 C) 40 D) 36

8. (Q 3,5 ball) $y = |x - 1|$, $x = -1$, $x = 2$ va $y = 0$ chiziqlar bilan chegaralangan figurani absissalari o‘qi atrofida aylanishidan hosil bo‘lgan jismning hajmini toping.

A) 3π B) 4π C) 5π D) π

9. (Q 3,5 ball) Ushbu l_1, l_2 va l_3 to‘g‘ri chiziqlar bir tekislikda yotadi va o‘zaro parallel. l_1 chizidan 5 ta, l_2 chiziqdan 3 ta va l_3 chiziqdan 6 ta nuqta olingan. Uchlari shu nuqtalarda bo‘lgan nechta uchburchak yasash mumkin**.**



A) 386 B) 342 C) 354 D) 333

10. (Q 3,5 ball) Ushbu $(x + y + z)^{10}$ ifoda yoyilmasida x^4 ko‘paytuvchisiga ega bo‘lgan nechta turli hadi bor?

A) 4 B) 5 C) 7 D) 8

11. (Q 3,5 ball) Tasodifiy ravishda tanlangan 32 tup g‘o‘za o‘simligining asosiy poyasidagi bo‘g‘inlar soni quyidagi jadvalda berilgan:

Jadvaldan foydalanib nisbiy chastotalarini toping.

10	11	10	10	10	9	9	11
11	11	11	7	9	10	10	10
10	10	11	11	11	10	10	11
9	10	9	9	9	9	10	9

A) $w_1 = \frac{1}{32}, w_2 = \frac{1}{32}, w_3 = \frac{15}{32}, w_4 = \frac{29}{32}$

B) $w_1 = \frac{1}{32}, w_2 = \frac{9}{32}, w_3 = \frac{11}{32}, w_4 = \frac{10}{32}$

C) $w_1 = \frac{1}{32}, w_2 = \frac{9}{32}, w_3 = \frac{13}{32}, w_4 = \frac{9}{32}$

D) $w_1 = \frac{1}{32}, w_2 = \frac{8}{32}, w_3 = \frac{13}{32}, w_4 = \frac{11}{32}$

12. (M 4,5 ball) Tashkilotning avtomashinalari bir haftada sarflagan yoqilg‘i miqdori haqidagi ma’lumotlar quyidagicha bo‘lsin: 58, 44, 56, 52, 60. Bu qatorning standart chetlanishini hisoblang.

A) $2\sqrt{3}$ B) $4\sqrt{3}$ C) $4\sqrt{5}$ D) $4\sqrt{2}$

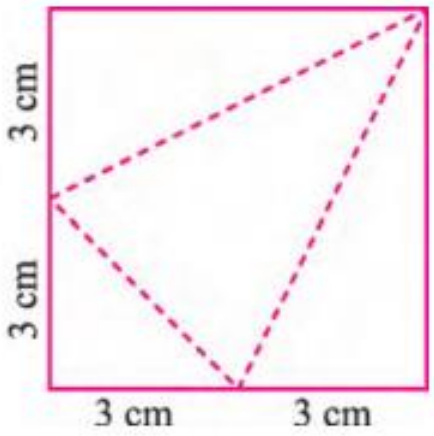
13. (B 4,5 ball) To‘g‘ri burchakli uchburchakning katetlari 6 cm va 8 cm ga teng. M nuqta uchburchak tekisligidan 12 cm masofada va uning hamma tomonlaridan bir xil masofada joylashgan. Shu masofani toping.

A) 12 cm B) 13 cm C) 15 cm D) 14 cm

14. (B 4,5 ball) Uchburchakli muntazam piramida asosining tomoni 10 ga teng. Yon yog‘i asos tekisligi bilan 45^0 li burchak hosil qiladi. Piramidaning balandligini toping.

A) $5\sqrt{2}$ B) $5\sqrt{3}$ C) $4\sqrt{3}$ D) $\frac{5}{\sqrt{3}}$

15. (Q 5 ball) Tomoni 6 cm bo‘lgan kvadrat shaklidagi varaqni rasmda ko‘rsatilgandek qilib buklab, uchburchakli piramida hosil qilindi. Bu piramida hajmini toping.



A) 8 cm B) 18 cm C) 9 cm D) 16 cm

16. (Q 5 ball) Hajmi 36 ga teng bo‘lgan muntazam to‘rtburchakli piramidaning asosidagi ikki yoqli burchagi 45^0. Piramida asosining tomonini toping.

A) 4 B) 8 C) 6 D) 12

17. (Q 5 ball) Konus asosining radiusi 2 ga, yasovchisi va asos tekisligi orasidagi burchak 60^0 ga teng. Konusning hajmini toping. **(Q. 5,2 ball)**

A) $\frac{8\pi}{3}$ B) $\frac{8\pi\sqrt{3}}{3}$ C) 24π D) $8\pi\sqrt{3}$

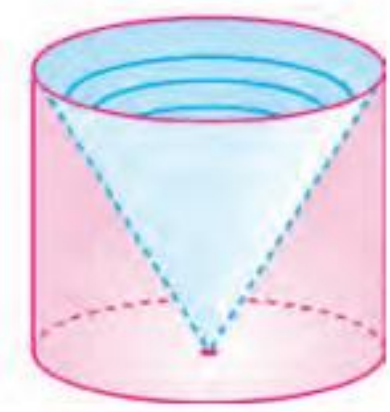
18. (Q 5 ball) Konusning balandligi 10 ga, o‘q kesimi uchidagi burchagi 120^0 ga teng. Konus hajmining konus yon sirtiga nisbatini toping. **(Q. 5,2 ball)**

A) $\frac{5}{\sqrt{3}}$ B) 2 C) $2\sqrt{3}$ D) $\sqrt{\frac{3}{2}}$

19. (Q 5 ball) Muntazam uchburchakning tomoni 2 ga teng. Shu uchburchakni uchidan o‘tuvchi va qarama - qarshi tomoniga parallel o‘q atrofida aylantirishdan hosil bo‘lgan jismning hajmini toping.

A) 6π B) 4π C) $\frac{11}{2}\pi$ D) 8π

20. (M 6 ball) Silindrdan konus rasmda ko‘rsatilgandek o‘yib olingan. Agar silindr asosining radiusi 6 cm va balandligi 8 cm bo‘lsa, hosil bo‘lgan jismning hajmini toping.



A) $148\,\pi$ B) $172\,\pi$
C) $136\,\pi$ D) $192\,\pi$