**REPITITSION TEST 1**

**1-variant.**

**MATEMATIKA**

**1.** $x^{2}+x-m=0$ va $x\_{1}^{3}∙x\_{2}-3x\_{1}∙x\_{2}=2m$ bo`lsa, m nechaga teng? A) 0 B) 1 C) -1 D) 2 E) -2

**2.** Musbat butun sonlar uchun $H=\frac{2ab}{a+b}$ $G=\sqrt{ab}$ $A=\frac{a+b}{2}$ $Q=\sqrt{\frac{a^{2}+b^{2}}{2}}$ kattaliklarni qaraylik. Quyidagi munosabatlarning qaysi biri doimo o`rinli?

**A)** $H<G<A\leq Q$ **B)** $G\leq A\leq H\leq Q$

**C)** $G\leq H\leq A\leq Q$ **D)** $Q\leq G\leq A\leq H$

**E)** $H\leq G\leq A\leq Q$

**3.** $\left(x+5\right)^{4}+8\left(x+5\right)^{2}-9=0$ tenglamaning ildizlari yig`indisini toping?

A) 4 B) 5 C) -10 D) -4 E) -5

**4.** $\left\{\begin{matrix}\left(x-1\right)\left(y-1\right)=3\\\left(x+2\right)\left(y+2\right)=24\end{matrix}\right.$ tenglamalar sistemasi yechimining juftligi nechta? A) 8 B) 4 C) 3 D) 2 E) 1

**5.** $5x^{2}-kx-1=0$ tenglamaning ildizlari $x\_{1}-x\_{2}=1$ shartni qanoatlantirsa *k* ning qiymatini toping?

A) $k=\pm \sqrt{5}$ B) $k=\pm 3\sqrt{5}$ C) $k=\pm 2\sqrt{5}$

 D) $k=\pm 4\sqrt{5}$ E) $k=\pm 5\sqrt{5}$

**6.** $\left(\frac{1}{\sqrt{a}+\sqrt{a+1}}-\frac{1}{\sqrt{a}-\sqrt{a+1}}\right)$:$\frac{\sqrt{a+1}}{\sqrt{a-1}}$ ifodani soddalashtiring.

A)$ \sqrt{a-1}$ B) $2\sqrt{a+1}$ C) $2\sqrt{a-1}$

 D) $\sqrt{a+1}$ E) $2-\sqrt{a-1}$

**7.** $4∙b^{2}∙x∙z^{4}∙x∙a∙x∙c∙y^{3}$ birhadning darajasini toping?

**A)** $13$ **B)** $16$ **C)** $14$ **D)**$ 15 $ E) 12

**8.** $f\left(x\right)=2f\left(x+2\right)-5 $va $f\left(1\right)=3$ bo`lsa, $f\left(5\right)=?$

A) 4,5 B) 7 C) 3 D) 1,5 E) 2,4

**9.** $\left\{\begin{matrix}x^{3}-1=90-y^{6}\\x+1+y^{2}=8\end{matrix}\right.$ tenglamalar sistemasining barcha haqiqiy yechimlari $\left(x\_{1}; y\_{1}\right)$, $\left(x\_{2}; y\_{2}\right),…\left(x\_{n}; y\_{n}\right)$ bo`lsa,

 $x\_{1}∙y\_{1}∙…∙x\_{n}∙y\_{n}$ ni toping?

A) 1592 B) 3224 C) 3482 D) 4217 E) 1728

**10.** Bir gala chumchuq 1 tadan shoxga qo`nganda, 1 ta chumchuq ortib qoladi, ikkitadan qo`nganda esa 1 ta shox ortib qoladi, Nechta chumchuq va nechta shox bor?

A) 1 va 2 B) 4 va 3 C) 3 va 4 D) 4 va 5 E) 5 va 4

**11.** Agar cheksiz kamayuvchi geometric progressiyaning barcha hadlari yig`indisi $f\left(x\right)=x^{3}+3x-9$ funksiyaning [-2;3] kesmadagi eng katta qiymatiga teng, va $b\_{1}-b\_{2}=f^{'}(0)$ ga teng bo`lsa, cheksiz kamayuvchi geometric progressiyaning maxrajini toping?

A) 2 B) 2/3 C) 3/2 D) 3 E) 0

**12.** $\left[\frac{\left\{2,5\right\}+\left[2,5\right]}{\left\{3,5\right\}+\left[3,5\right]}\right]∙\left\{\frac{\left\{3,9\right\}+\left[-1,8\right]}{\left[3,9\right]+\left\{-1,8\right\}}\right\}$ ifodaning qiymatini toping. {}- sonning kasr qismi. []-sonning butun qismi.

A) 0 B) 1 C) 2 D) 3 E) 5

**13.** Bir kunlik dars jadvali turli fanlar bo`yicha 3 ta dars bor. 9 ta fandan iborat bo`lgan shunday jadvallar sonini toping?

A) 740 B) 402 C) 720 D) 504 E) 450

**14.** Berilgan J; A; S natural sonlar uchun BBS(J)=20 BBS(A)=40 va BBS(S)=60 tenglik o`rinli bo`lsa, BBY(J)+BBY(A)+BBY(S) ning qiymatini toping? (BBS-butun bo`luvchilar soni, BBY- butun bo`luvchilar yig`indisi)

A) 0 B) 1440 C) 28804 D) 31 E) aniqlab bo`lmaydi

**15.** *j* parametrning qanday qiymatida

$3\left(x-y\right)=2y+6$ va $5x+j∙y+8=0$ to`g`ri chiziqlar kesishish nuqtasi koordinata tekistligining IV chorak bissekrissasida yotadi?

A) 73/4 B) 37/4 C) 43/7 D) 47/3 E) 31/22

**16.** $\left(a+3b\right)^{5}$ ko`phadning 4-o`rinda turgan koeffitsiyentini toping?

A) 624 B) 405 C) 270 D) 116 E) 80

**17.** Oxirgi raqami 1 bo`lgan va [49; 350] kesmada tegishli bo`lgan barcha natural sonlar yig`indisini toping?

A) 5921 B) 4850 C) 5960 D) 5880 E) 4682

**18.** $5∙\left[12\frac{2}{7}+5\frac{3}{4}\right]-8∙\left[3\frac{2}{3}\right]∙\left[2,(9)\right] hisoblang.$ A) 13 B) 18 C) 196 D) 144 E) 225

**19.** Ta`lim muassasasida barcha o`quvchilar kamida bitta ingliz yoki nemis tilida so`zlasha oladilar, ayrimlari esa ikkala tilni ham biladilar. O`quvchilarning 80% ingliz tilini 70% nemis tilini biladilar, ikkala tilni ham biladigan o`quvchilar barcha o`quvchilarning necha foizini tashkil qiladi?

A) 40 B) 50 C) 60 D) 30 E) aniqlab bo`lmaydi

**20.** $\frac{\left(a-3\right)^{2}}{a}$ ifoda natural qiymat qabul qiladigan barcha natural a lar yig`indisini toping?

A) 2 B) 3 C) 9 D)10 E) aniqlab bo`lmaydi

**21.** Grafigi berilgan parabolaning ordinatasi qaysi?

A) 4 B) 4,5 C) 5 D) 2 E) 3,5

**22.** Quyidagi shartlarning qaysi biri bajarilganda chiziqli funksiyadan olingan ixtiyoriy nuqta uchun abssissa va ordinata o`qlarigacha bo`lgan masofalar teng bo`ladi? (*y=kx+b*)

**A)** *y=x* chizig`iga nisbatan simmetrik bo`lsa

**B)** *k≠b* **C)** $tgα=45°$ **D)** *y=x* , *k=b* **E)** $-1<k=b\ne 0$

**23.** $g\left(x\right)$ funksiya $y=lg\left(x^{2}-1\right)$ funksiyaga teskari funksiya bo`lsa, $g\left(0\right)=?$ A) 1 B) $\sqrt{2}$ C) 0 D) $2^{lg⁡(0)}$ E) $\sqrt{3}$

**24.** $\left\{\begin{array}{c}\sqrt{x^{2}+12x+36}=x+6\\\sqrt{x^{2}-12x+36}=6-x\end{array}\right.$ tenglamalar sistemasini qanoatlantiruvchi nechta butun sonlar bor?

A) 8 B) 9 C) 12 D) 13 E) $\infty $

**25.** $k\left(3x-k\right)=6x-4$ tanglama *k* ning qanday qiymatida bitta manfiy ildizga ega?

A)$ \left(-\infty ;2\right)$ B) $\left(-\infty ;-2\right)$ C) $\left(-\infty ;0\right)$ D) $\left(0;2\right)$ E) $\left(-2;0\right)$

**26.** $0,00000004^{2}∙0,00000026$ sonni standart shaklga keltiring.

A) $4,16∙10^{-22}$ B) $19,6∙10^{-7}$ C) $1,96∙10^{-6}$

D) $416∙10^{-24}$ E) $ 19,6∙10^{-4}$

**27.** Natural sonlar qatori har bir natural sonning kvadrati bilan tugaydigan quyidagi qismlarga ajratilgan:

1, (2,3,4), (5,6,7,8,9), (10,11,12,13,14,15,16)…

10-qismdagi sonlar yig`indisini toping?

A) 2039 B) 931 C) 1729 D) 559 E) 431

**28.** $y=ax^{3}+b$ kubik parabolaning grafigi A(1; 18) va B(-1;14) nuqtalardan o`tadi. Qaysi nuqtada bu funksiya OX o`qini kesib o`tadi? A) (3;0) B) (-3;0) C) (2;0) D) (-2;0) E) (1;0)

**29.** Chizmada (-11;3) oraliqda aniqlangan f(x) funksiya hosilasining grafigi tasvirlangan nechta nuqta f(x) funksiya grafigiga urinma y=3x-11 to`g`ri chiziqqa parallel bo`ladi yoki u bilan ustma-ust tushadi?

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**A)** 4 **B)** 0 **C)** 3 **D)** 6 E) 5

**30.** $y=\frac{x^{5}-3x^{4}+x^{3}+2x^{2}-6x+2}{x^{2}-3x+1}$ berilgan funksiyaga teskari funksiyani aniqlang? A) $\sqrt{x}+2$ B) $\sqrt[3]{x-2}$ C) $\sqrt{x-3}$

D) $\sqrt[3]{x}+3$ E) aniqlab bo`lmaydi

**31.** Kubning pastki yon tomonida 6 ta, chap tomonida 4 ta, va orqa tomonida 2 ta nuqta bor. Kubga qarab eng ko`pi bilan nechta nuqtani ko`rish mumkin?

A) 12 B) 13 C) 14 D) 15 E) 16

**32.** 1 kilogram 20 so`mdan olingan olmaning 3 kilogramidan 1 kilogram sharbat olinib, 72 so`mdan sotiladi. Olmaning narxi 5% kamayganda foyda nisbatining o`zgarmasligi uchun sharbatning narxi avvalgi narxidan necha so`m kam bo`lishi kerak?

**A)** 18  **B)** 12 **C)** 15 **D)** 16 **E)** 19

**33.** Agar $f\left(x\right)=mx^{2}-\left(m-12\right)x-2$ parabolaning simmetriya o`qi tenglamasi x=-1 bo`lsa, m ning qiymatini toping?

A) 2 B) 3 C) 4 D) 5 E) 6

**34.** $x+\sqrt{x+\frac{1}{2}+\sqrt{x+\frac{1}{4}}}=2$ tenglamaning eng kichik ildizini toping. A) $2-2\sqrt{2}$ B) $2-\sqrt{2}$ C) $\sqrt{2}-1$ D) 2 E) 1

**35.** $\sqrt{\left(x-2\right)^{2}}+\left|x+3\right|=5$ tenglamaning barcha butun yechimlari yig`indisini toping? A) 6 B) -6 C) -1 D) -3 E) -5

**36.** $1+\frac{g}{1+\frac{g}{1+\frac{g}{…}}}=4;$ $1-\frac{f}{1-\frac{f}{1-\frac{f}{…}}}=6$ tenglamning yechimlari ayirmasini toping?

A) 16 va -16 B) 42 va -42 C) 30 va -12 D) 42 va 30 E) 0