№	Savol	A	B	C	D
1.	Asosiy diagonalidan pastdagi barcha elementlar nolga teng bo'lsa, kvadrat matritsa qanday nomlanadi?	Yuqori uchburchak matritsa	Pastki uchburchak matritsa	Simmetrikulyar matritsa	Dioganal matritsa
2.	Asosiy diagonali elementlaridan tashqari barcha elementlar nolga teng bo'lsa, kvadrat matritsa qanday nomlanadi?	Dioganal matritsa	Skalar matritsa	Yuqori uchburchak matritsa	Pastki uchburchak matritsa
3.	Quyidagi matritsa tenglamasidan x y $\begin{pmatrix} 3 & 2 \\ x+y & 1 \end{pmatrix} = \begin{pmatrix} 3 & y \\ 2 & 1 \end{pmatrix}$	(0;2)	(1;0)	(2;2)	(3;2)
4.	Quyidagi matritsa tenglamasidan x y $\begin{pmatrix} 3 & 2-y \\ x+y & 1 \end{pmatrix} = \begin{pmatrix} 3 & y \\ 2 & 1 \end{pmatrix}$	(1;1)	(2;2)	(3;2)	(0; 4)
5.	Quyidagi matritsa tenglamasidan x y $\begin{pmatrix} 3 & 4-y \\ x+y & 1 \end{pmatrix} = \begin{pmatrix} 3 & y \\ 3 & 1 \end{pmatrix}.$	(1,2)	(2,2)	(3,3)	(5,4)

6.	Quyidagi matritsa tenglamasidan x y topilsin. $\begin{pmatrix} 3 & 4-y \\ x-y & 1 \end{pmatrix} = \begin{pmatrix} 3 & y \\ 3 & 1 \end{pmatrix}$	(5,2)	(1,2)	(2,2)	(3,3)
7.	Quyidagi matritsa tenglamasidan x y topilsin. $\begin{pmatrix} 3 & 4-y \\ x-y & 1 \end{pmatrix} = \begin{pmatrix} 3 & y \\ 2 & 1 \end{pmatrix}$	(4,2)	(5,2)	(1,2)	(2,2)
8.	Quyidagi matritsa tenglamasidan x y topilsin. $\begin{pmatrix} 3 & 6-y \\ x-y & 1 \end{pmatrix} = \begin{pmatrix} 3 & y \\ 2 & 1 \end{pmatrix}$	(5,3)	(4,2)	(5,2)	(1,2)
9.	Quyidagi matritsa tenglamasidan x y topilsin. $\begin{pmatrix} 3 & 8-y \\ 2x-y & 1 \end{pmatrix} = \begin{pmatrix} 3 & y \\ 2 & 1 \end{pmatrix}$	(3,4)	(5,3)	(4,2)	(5,2)
10.	Matrisalar uchun $2A+3B$ yig'indini toping $A=\begin{pmatrix} 5 & 1 \\ 3 & 2 \end{pmatrix}$ u $B=\begin{pmatrix} 3 & 1 \\ 2 & 4 \end{pmatrix}$.	$\begin{pmatrix} 19 & 5 \\ 12 & 16 \end{pmatrix}$	$\begin{pmatrix} 18 & 5 \\ 10 & 8 \end{pmatrix}$	$\begin{pmatrix} 18 & 6 \\ 11 & 8 \end{pmatrix}$	$\begin{pmatrix} 12 & 5 \\ 10 & 8 \end{pmatrix}$
11.	Berilgan $A=\begin{bmatrix} 5 & 1 & -3 \\ 6 & 2 & -4 \end{bmatrix}$ va	$\begin{bmatrix} 4 \\ 8 \end{bmatrix}$	$\begin{bmatrix} 4 \\ 18 \end{bmatrix}$	$\begin{bmatrix} 4 \\ 15 \end{bmatrix}$	$\begin{bmatrix} 14 \\ 8 \end{bmatrix}$

	$B=\begin{bmatrix}-1\\3\\-2\end{bmatrix}$ matritsalar. Hisoblang $A\cdot B$				
12.	Matrisalar uchun $2A+3B$ yig'indini toping $A=\begin{pmatrix}4 & 1\\2 & 2\end{pmatrix}$ va $B=\begin{pmatrix}3 & 1\\2 & 1\end{pmatrix}$	$\begin{pmatrix}17 & 5\\10 & 7\end{pmatrix}$	$\begin{pmatrix}17 & 5\\13 & 17\end{pmatrix}$	$\begin{pmatrix}17 & 5\\10 & 9\end{pmatrix}$	$\begin{pmatrix}17 & 5\\10 & 12\end{pmatrix}$
13.	Matrisalar uchun $2A+3B$ yig'indini toping $A=\begin{pmatrix}3 & 2\\4 & 2\end{pmatrix}$ $B=\begin{pmatrix}2 & 1\\2 & 4\end{pmatrix}$	$\begin{pmatrix}12 & 7\\14 & 16\end{pmatrix}$	$\begin{pmatrix}19 & 5\\12 & 16\end{pmatrix}$	$\begin{pmatrix}18 & 5\\10 & 8\end{pmatrix}$	$\begin{pmatrix}18 & 6\\11 & 8\end{pmatrix}$
14.	Matrisalar uchun $2A+3B$ yig'indini toping $A=\begin{pmatrix}5 & 7\\3 & 6\end{pmatrix}$ $B=\begin{pmatrix}7 & 4\\5 & 5\end{pmatrix}$	$\begin{pmatrix}31 & 26\\21 & 27\end{pmatrix}$	$\begin{pmatrix}31 & 26\\21 & 17\end{pmatrix}$	$\begin{pmatrix}31 & 26\\25 & 27\end{pmatrix}$	$\begin{pmatrix}31 & 26\\21 & 28\end{pmatrix}$

15.	Matrisalar uchun $2A+3B$ yig'indini toping $A = \begin{pmatrix} 3 & 3 \\ 4 & 2 \end{pmatrix}$ $B = \begin{pmatrix} 2 & 2 \\ 2 & 4 \end{pmatrix}$	$\begin{pmatrix} 12 & 12 \\ 14 & 16 \end{pmatrix}$	$\begin{pmatrix} 12 & 12 \\ 14 & 6 \end{pmatrix}$	$\begin{pmatrix} 12 & 12 \\ 16 & 16 \end{pmatrix}$	$\begin{pmatrix} 12 & 12 \\ 4 & 6 \end{pmatrix}$
16.	Matrisalar uchun $2A+3B$ yig'indini toping $A = \begin{pmatrix} 3 & 1 \\ 2 & 1 \end{pmatrix}$ $B = \begin{pmatrix} 4 & 1 \\ 2 & 2 \end{pmatrix}$	$\begin{pmatrix} 18 & 5 \\ 10 & 8 \end{pmatrix}$	$\begin{pmatrix} 18 & 6 \\ 11 & 8 \end{pmatrix}$	$\begin{pmatrix} 12 & 5 \\ 10 & 8 \end{pmatrix}$	$\begin{pmatrix} 18 & 5 \\ 10 & 18 \end{pmatrix}$
17.	Berilgan $A=\begin{bmatrix} 2 & 1 & -3 \\ 4 & 0 & -4 \end{bmatrix}$ va $B=\begin{bmatrix} 1 & 2 \\ -3 & 1 \\ 0 & 2 \end{bmatrix}$ matritsalar. Hisoblang $B \cdot A$	$\begin{bmatrix} 10 & 1 & -11 \\ -2 & -3 & 5 \\ 8 & 0 & -8 \end{bmatrix}$	$\begin{bmatrix} 10 & 1 & -11 \\ -2 & -13 & 5 \\ 8 & 0 & -18 \end{bmatrix}$	$\begin{bmatrix} 10 & 11 & -11 \\ -12 & -3 & 5 \\ 8 & 0 & -8 \end{bmatrix}$	$\begin{bmatrix} 10 & 1 & -11 \\ -2 & -3 & 5 \\ 8 & 10 & -28 \end{bmatrix}$
18.	Berilgan $A=\begin{bmatrix} -2 \\ 3 \\ 4 \end{bmatrix}$ va $B=\begin{bmatrix} 2 & 3 & -1 \end{bmatrix}$	$\begin{bmatrix} 1 \end{bmatrix}$	$\begin{pmatrix} 18 & 6 \\ 11 & 8 \end{pmatrix}$	$\begin{pmatrix} 12 & 5 \\ 10 & 8 \end{pmatrix}$	$\begin{pmatrix} 18 & 5 \\ 10 & 18 \end{pmatrix}$

	matritsalar. Hisoblang $B \cdot A$				
19.	Berilgan $A = \begin{bmatrix} -2 \\ 3 \\ 4 \end{bmatrix}$ va $y' + xy = xy^3$ $B = [2 \quad 3 \quad -1]$ matritsalar. Hisoblang $A \cdot B$	$\begin{bmatrix} -4 & -6 & 2 \\ 6 & 9 & -3 \\ 8 & 12 & -4 \end{bmatrix}$	$\begin{bmatrix} -4 & -6 & 2 \\ 6 & 9 & -3 \\ 8 & 12 & -14 \end{bmatrix}$	$\begin{bmatrix} -4 & -6 & 2 \\ 6 & 9 & -13 \\ 8 & 12 & -4 \end{bmatrix}$	$\begin{bmatrix} -4 & -6 & 12 \\ 6 & 9 & -3 \\ 18 & 12 & -4 \end{bmatrix}$
20.	Berilgan $A = \begin{bmatrix} 5 & 1 & -3 \\ 6 & 2 & -4 \end{bmatrix}$ va $B = \begin{bmatrix} -1 \\ 3 \\ -2 \end{bmatrix}$ matritsalar. Hisoblang $B^T \cdot A^T$	$[4 \quad 8]$	$[4 \quad 18]$	$[-4 \quad 8]$	$[4 \quad -8]$
21.	$A = \begin{pmatrix} 4 & 1 \\ 2 & 2 \end{pmatrix}$ u $B = \begin{pmatrix} 3 & 1 \\ 2 & 1 \end{pmatrix}$ Matrisalar berilgan. Hisoblang $A \cdot B$	$\begin{pmatrix} 14 & 5 \\ 10 & 4 \end{pmatrix}$	$\begin{pmatrix} 14 & 5 \\ 10 & 14 \end{pmatrix}$	$\begin{pmatrix} 14 & 15 \\ 10 & 4 \end{pmatrix}$	$\begin{pmatrix} 14 & 5 \\ 12 & 4 \end{pmatrix}$
22.	$A = \begin{pmatrix} 5 & 1 \\ 3 & 2 \end{pmatrix}$ u $B = \begin{pmatrix} 3 & 1 \\ 2 & 4 \end{pmatrix}$ Matrisalar berilgan. Hisoblang $A \cdot B$	$\begin{pmatrix} 17 & 9 \\ 13 & 11 \end{pmatrix}$	$\begin{pmatrix} 17 & 9 \\ 13 & 21 \end{pmatrix}$	$\begin{pmatrix} 17 & 9 \\ 13 & 31 \end{pmatrix}$	$\begin{pmatrix} 17 & 19 \\ 13 & 11 \end{pmatrix}$
23.	$A = \begin{pmatrix} 3 & 2 \\ 3 & 2 \end{pmatrix}$ u $B = \begin{pmatrix} 4 & 1 \\ 2 & 4 \end{pmatrix}$ Matrisalar berilgan. Hisoblang $A \cdot B$	$\begin{pmatrix} 16 & 11 \\ 16 & 11 \end{pmatrix}$	$\begin{pmatrix} 16 & 11 \\ 16 & 21 \end{pmatrix}$	$\begin{pmatrix} 16 & 11 \\ 16 & 31 \end{pmatrix}$	$\begin{pmatrix} 16 & 21 \\ 16 & 11 \end{pmatrix}$

24.	$A=\begin{pmatrix}3 & 2\\4 & 2\end{pmatrix}$ u $B=\begin{pmatrix}2 & 1\\2 & 4\end{pmatrix}$ Matrisalar berilgan. Hisoblang $A\cdot B$	$\begin{pmatrix}10 & 11\\12 & 12\end{pmatrix}$	$\begin{pmatrix}10 & 11\\12 & 22\end{pmatrix}$	$\begin{pmatrix}10 & 11\\22 & 12\end{pmatrix}$	$\begin{pmatrix}10 & 11\\12 & 32\end{pmatrix}$
25.	$A=\begin{pmatrix}6 & 7\\3 & 3\end{pmatrix}$ u $B=\begin{pmatrix}4 & 4\\5 & 2\end{pmatrix}$ Matrisalar berilgan. Hisoblang $A\cdot B$	$\begin{pmatrix}59 & 28\\27 & 18\end{pmatrix}$	$\begin{pmatrix}59 & 28\\27 & 28\end{pmatrix}$	$\begin{pmatrix}59 & 28\\27 & 38\end{pmatrix}$	$\begin{pmatrix}59 & 28\\37 & 18\end{pmatrix}$

№	Savol	A	B	C	D
1	Hisoblang: $\begin{vmatrix} 0 & 3 & 7 \\ 1 & -3 & 4 \\ 0 & 2 & 6 \end{vmatrix}$	-4	3	-5	6
2.	Hisoblang: $\begin{vmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 0 \end{vmatrix}$	27	25	28	29
3.	Hisoblang: $\begin{vmatrix} 2 & 2 & -1 \\ 7 & 0 & 3 \\ 3 & 4 & 0 \end{vmatrix}$	-34	-36	-42	28
4.	Hisoblang: $\begin{vmatrix} 2 & 3 & -1 \\ -2 & 4 & 7 \\ 4 & 6 & -2 \end{vmatrix}$	0	2	3	8
5.	Hisoblang: $\begin{vmatrix} 5 & 0 & 6 \\ 4 & 0 & 5 \\ 2 & 4 & 3 \end{vmatrix}$	-4	5	12	14
6.	Hisoblang: $\begin{vmatrix} 1 & 2 & 5 \\ 5 & -3 & 7 \\ 4 & 6 & 5 \end{vmatrix}$	159	125	128	129
7.	Hisoblang: $\begin{vmatrix} 10 & -2 & 4 \\ -15 & 3 & 6 \\ 20 & -1 & 5 \end{vmatrix}$	-360	259	325	428
8.	Hisoblang: $\begin{vmatrix} 1 & -2 & 4 \\ -3 & 5 & 5 \\ 2 & -1 & 3 \end{vmatrix}$	-46	-34	-36	-42

9.	Hisoblang: $\begin{vmatrix} 4 & -2 & 0 \\ 3 & 5 & -6 \\ -3 & 4 & 0 \end{vmatrix}$	60	27	25	28
10.	Hisoblang: $\begin{vmatrix} 2 & -1 & 3 \\ 1 & 1 & 4 \\ 2 & -3 & 5 \end{vmatrix}$	16	60	27	25
11.	Tenglamani yeching: $\begin{vmatrix} \sin 2x & -\cos 2x \\ \sin 3x & \cos 3x \end{vmatrix} = 0$	$\frac{\pi k}{5};\ k \in Z$	$\frac{\pi k}{3};\ k \in Z$	$\frac{2\pi k}{5};\ k \in Z$	$\frac{3\pi k}{5};\ k \in Z$
12.	Tenglamani yeching: $\begin{vmatrix} x+7 & 5 \\ -6 & x-6 \end{vmatrix} = 0$	$\{-4; 3\}$	$\{4; -3\}$	$\{4; 13\}$	$\{14; 13\}$
13.	Hisoblang: $\begin{vmatrix} 1-a & 1 & 1 \\ 1 & 1-a & 1 \\ 1 & 1 & 1-a \end{vmatrix}$	$a^2(3-a)$	$a^2(a-3)$	$a^2(3+a)$	$a(3-a^2)$
14.	Determinant uchun M_{23} minorini toping: $\Delta = \begin{vmatrix} 2 & -4 & 1 & 5 \\ 1 & -3 & 2 & 5 \\ 2 & 2 & 0 & -3 \\ 3 & -1 & 1 & 2 \end{vmatrix}$	14	18	16	24

15.	M_{23} Minorini toping $\Delta = \begin{vmatrix} 4 & 4 & 0 & -6 \\ 1 & -3 & 2 & 5 \\ 2 & 2 & 0 & -3 \\ 3 & -1 & 1 & 2 \end{vmatrix}$	0	5	14	18
16.	Determinant uchun algebraik A_{13} to'ldiruvchini toping : $\begin{vmatrix} 2 & 1 & -4 \\ 1 & 3 & 5 \\ 3 & 2 & -1 \end{vmatrix}$	-7	8	9	17
17.	Determinant uchun algebraik A_{32} to'ldiruvchini toping : $\begin{vmatrix} 2 & 1 & -4 \\ 1 & 3 & 5 \\ 3 & 2 & -1 \end{vmatrix}$	-14	18	24	34
18.	M_{23} Minorini toping $\begin{vmatrix} 1 & 1 & 4 \\ -1 & 2 & 3 \\ -3 & 2 & 5 \end{vmatrix}$	5	15	42	34
19.	Determinant uchun algebraik A_{13} to'ldiruvchini toping : $\begin{vmatrix} 2 & 1 & -4 \\ 1 & 3 & 5 \\ 3 & 2 & -1 \end{vmatrix}$	-7	5	15	42
20.	$y' + xy = xy^3$ Hisoblang: $\begin{vmatrix} 1 & 8 & 9 & 2 \\ -2 & 5 & 7 & -4 \\ 3 & 4 & 3 & 6 \\ -4 & 7 & 4 & -8 \end{vmatrix}$	0	45	24	36

21.	Hisoblang: $\begin{vmatrix} 1 & 8 & 16 & 3 \\ -2 & 5 & 10 & -4 \\ 3 & 4 & 8 & 8 \\ -4 & 7 & 14 & -8 \end{vmatrix}$	0	55	124	236
22.	Hisoblang: $\begin{vmatrix} 1 & 8 & 9 & 4 \\ -2 & 10 & 7 & 5 \\ 3 & 4 & 3 & 2 \\ -4 & 12 & 4 & 6 \end{vmatrix}$	0	145	224	36
23.	Hisoblang: $\begin{vmatrix} 1 & 9 & 18 & 2 \\ -2 & 11 & 22 & 4 \\ 3 & 6 & 12 & 6 \\ -4 & 12 & 24 & 8 \end{vmatrix}$	0	245	424	336
24.	Hisoblang: $\begin{vmatrix} 1 & 8 & 9 & 2 \\ 5 & 5 & 7 & 10 \\ 3 & 4 & 3 & 6 \\ 4 & 7 & 4 & 8 \end{vmatrix}$	0	345	224	436
25.	Hisoblang: $\begin{vmatrix} 1 & 8 & 9 & 2 \\ -2 & 5 & 7 & -4 \\ 2 & 16 & 18 & 4 \\ -4 & 7 & 4 & -8 \end{vmatrix}$	0	545	624	436

№	Savol	A	B	C	D
26.	Matritsaning rangini toping: $B=\begin{pmatrix} 2 & 1 & 0 \\ 1 & -1 & 2 \\ 3 & 2 & 1 \end{pmatrix}$	$rang(B)=3$	$rang(B)=1$	$rang(B)=2$	$rang(B)=4$
27.	Matritsaning rangini toping: $A=\begin{pmatrix} -1 & 4 & 2 & -2 \\ 3 & -8 & -5 & 3 \\ -1 & 8 & 3 & -5 \end{pmatrix}$	$rang(A)=3$	$rang(A)=4$	$rang(A)=1$	$rang(A)=2$
28.	Matritsaning rangini toping: $B=\begin{pmatrix} 1 & -1 & 2 & 2 \\ 0 & -1 & -1 & 2 \\ -1 & 2 & 0 & -2 \\ 1 & 2 & -2 & -1 \end{pmatrix}$	$rang(B)=4$	$rang(B)=1$	$rang(B)=2$	$rang(B)=3$
29.	Matritsaning rangini toping: $A=\begin{pmatrix} -1 & 4 & 2 & -2 \\ 3 & -8 & -5 & 3 \\ -1 & 8 & 3 & -5 \end{pmatrix}$	$rang(A)=2$	$rang(A)=3$	$rang(A)=1$	$rang(A)=4$

30.	Matritsaning rangini toping: $B=\begin{pmatrix} 2 & 1 & 3 \\ 1 & 2 & 4 \\ 2 & 4 & 8 \end{pmatrix}$	$rang(B)=2$	$rang(B)=4$	$rang(B)=1$	$rang(B)=3$
31.	Matritsaning rangini toping: $A=\begin{pmatrix} 1 & -2 & 1 & 3 \\ 3 & 1 & 0 & 7 \\ 2 & 3 & -1 & 4 \end{pmatrix}$	$rang(A)=2$	$rang(A)=3$	$rang(A)=1$	$rang(A)=4$
32.	Matritsaning rangini toping: $A=\begin{pmatrix} 2 & -4 & 3 & 1 & 0 \\ 1 & -2 & 1 & -4 & 2 \\ 0 & 1 & -1 & 3 & 1 \\ 4 & -7 & 4 & -4 & 5 \end{pmatrix}$	$rang(A)=3$	$rang(A)=4$	$rang(A)=1$	$rang(A)=2$
33.	Berilgan matritsa: $A=\begin{pmatrix} 2 & -4 & 3 & 1 & 0 \\ 1 & -2 & 1 & -4 & 2 \\ 0 & 1 & -1 & 3 & 1 \\ 4 & -7 & 4 & -4 & 5 \end{pmatrix}$ $rang\left(A^T\right)=?$	$rang(A^T)=3$	$rang(A^T)=1$	$rang(A^T)=2$	$rang(A^T)=4$
34.	Matritsaning rangini toping:	$rang(A)=3$	$rang(A)=4$	$rang(A)=1$	$rang(A)=2$

	$A=\begin{pmatrix}2 & 1 & -1 & 1\\ 3 & -2 & 2 & -3\\ 5 & 1 & -1 & 2\\ 2 & -1 & 1 & -3\end{pmatrix}$				
35.	Matritsaning rangini toping: $A=\begin{pmatrix}1 & -2 & 4 & -3\\ -2 & 10 & -6 & 4\\ 2 & -4 & 8 & -6\\ -1 & 5 & -3 & 2\end{pmatrix}$	$rang(A)=2$	$rang(A)=3$	$rang(A)=4$	$rang(A)=1$
36.	Matritsaning rangini toping: $A=\begin{pmatrix}4 & 6 & -8 & -12\\ 1 & -2 & -3 & 7\\ 2 & 3 & -4 & -6\\ 3 & -6 & -9 & 21\end{pmatrix}$	$rang(A)=2$	$rang(A)=3$	$rang(A)=4$	$rang(A)=1$
37.	Matritsaning rangini toping: $A=\begin{pmatrix}-1 & 2 & 3 & 2\\ -4 & 8 & 12 & 8\\ -2 & 4 & 6 & 4\\ 3 & -6 & -9 & -6\end{pmatrix}$	$rang(B)=1$	$rang(B)=2$	$rang(B)=4$	$rang(B)=3$
38.	Matritsaning rangini toping:	$rang(A)=2$	$rang(A)=3$	$rang(A)=4$	$rang(A)=1$

	$A=\begin{pmatrix} -2 & 3 & 1 \\ 2 & 4 & 3 \\ -4 & 6 & 2 \end{pmatrix}$				
39.	Matritsaning rangini toping: $A=\begin{pmatrix} 1 & -2 & -0,5 & 1 \\ 0,7 & 2,5 & 1 & 2 \\ 2 & -4 & -1 & 2 \\ 1,4 & 5 & 2 & 4 \end{pmatrix}$	$rang(A)=2$	$rang(A)=3$	$rang(A)=4$	$rang(A)=1$
40.	Matritsaning rangini toping: $B=\begin{pmatrix} 2 & 1 & 0 \\ 1 & -1 & 2 \\ 3 & 2 & 1 \\ 6 & 4 & 2 \end{pmatrix}$	$rang(A)=3$	$rang(A)=4$	$rang(A)=1$	$rang(A)=2$
41.	Matritsaning rangini toping: $A=\begin{pmatrix} 1 & -2 & -0,5 & 1 \\ 0,7 & 2,5 & 1 & 2 \\ 2 & -4 & -1 & 2 \\ 1 & 4 & 7 & 9 \end{pmatrix}$	$rang(A)=3$	$rang(A)=4$	$rang(A)=1$	$rang(A)=2$
42.	Matritsaning rangini toping:	$rang(A)=2$	$rang(A)=3$	$rang(A)=4$	$rang(A)=1$

	$A=\begin{pmatrix}1 & -2 & -1 & 1\\ -3 & 6 & 3 & -3\\ 2 & -4 & -1 & 2\\ 2 & -4 & -2 & 2\end{pmatrix}$				
43.	Matritsaning rangini toping: $A=\begin{pmatrix}1 & -2 & -1 & 1\\ -3 & 6 & 3 & -3\\ 2 & -4 & -1 & 2\\ 1 & -2 & -1 & 1\end{pmatrix}$	$rang\left(A\right)=2$	$rang(A)=3$	$rang(A)=4$	$rang(A)=1$
44.	Matritsaning rangini toping: $A=\begin{pmatrix}1 & -2 & -1 & 1\\ -3 & 6 & 3 & -3\\ 2 & -4 & -2 & 2\\ 1 & -2 & -1 & 1\end{pmatrix}$	$rang(B)=1$	$rang(B)=2$	$rang(B)=4$	$rang(B)=3$
45.	Matritsaning rangini toping: $A=\begin{pmatrix}1 & -2 & -1 & 1\\ -3 & 6 & 3 & -3\\ 2 & -4 & -2 & -2\\ 1 & -2 & -1 & 1\end{pmatrix}$	$rang\left(A\right)=2$	$rang(A)=3$	$rang(A)=4$	$rang(A)=1$
46.	Matritsaning rangini toping:	$rang(B)=1$	$rang(B)=2$	$rang(B)=4$	$rang(B)=3$

	$A=\begin{pmatrix} 1 & -2 & -1 & 1 \\ -1 & 2 & 1 & -1 \\ 2 & -4 & -2 & 2 \\ 1 & -2 & -1 & 1 \end{pmatrix}$				
47.	A matritsa uchun nisbatlarning qaysi biri to'g'ri	$r(A)=r(A^T)$	$r(A)>r(A^T)$	$r(A)<r(A^T)$	$r(A)\neq r(A^T)$
48.	A va B matrisalari uchun nisbatlarning qaysi biri to'g'ri	$r(A+B)\geq \lvert r(A)-r(B)\rvert$	$r(A+B)\leq \lvert r(A)-r(B)\rvert$	$r(A+B)< \lvert r(A)-r(B)\rvert$	$r(A+B)= \lvert r(A)-r(B)\rvert$
49.	A va B matrisalari uchun nisbatlarning qaysi biri to'g'ri	$r(A\cdot B)\leq \min\{r(A);r(B)\}$	$r(A\cdot B)\geq \min\{r(A);r(B)\}$	$r(A\cdot B)> \min\{r(A);r(B)\}$	$r(A\cdot B)= \min\{r(A);r(B)\}$
50.	A va B matrisalari uchun nisbatlarning qaysi biri to'g'ri	$r(A+B)\leq r(A)+r(B)$	$r(A+B)\geq r(A)+r(B)$	$r(A+B)> r(A)+r(B)$	$r(A+B)= r(A)+r(B)$

№	Savol	A	B	C	D
	$A=\begin{pmatrix}-1 & 0\\ 1 & 2\end{pmatrix}$ A matritsaga teskari matritsani toping	$A^{-1}=\begin{pmatrix}-1 & 0\\ 0,5 & 0,5\end{pmatrix}$	$A^{-1}=\begin{pmatrix}-1 & 1\\ 0,5 & 0,5\end{pmatrix}$	$A^{-1}=\begin{pmatrix}-1 & 0\\ 0,5 & 1\end{pmatrix}$	$A^{-1}=\begin{pmatrix}-1 & 0,5\\ 0,5 & 0,5\end{pmatrix}$
2.	$A=\begin{pmatrix}2 & 3\\ 1 & 4\end{pmatrix}$ A matritsaga teskari matritsani toping	$A^{-1}=\begin{pmatrix}\frac{4}{5} & \frac{-3}{5}\\ \frac{-1}{5} & \frac{2}{5}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}\frac{3}{5} & \frac{-3}{5}\\ \frac{-1}{5} & \frac{3}{5}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}\frac{4}{5} & \frac{-2}{5}\\ \frac{-2}{5} & \frac{2}{5}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}\frac{2}{5} & \frac{-3}{5}\\ \frac{4}{5} & \frac{2}{5}\end{pmatrix}$
3.	$A=\begin{pmatrix}2 & -3\\ 4 & -8\end{pmatrix}$ A matritsaga teskari matritsani toping	$A^{-1}=\begin{pmatrix}2 & -\frac{3}{4}\\ 1 & -\frac{1}{2}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}1 & -\frac{3}{4}\\ 1 & -\frac{1}{2}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}2 & -\frac{3}{4}\\ 3 & -\frac{1}{2}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}2 & -\frac{3}{4}\\ 2 & -\frac{3}{2}\end{pmatrix}$
4.	$A=\begin{pmatrix}7 & 4\\ 3 & 2\end{pmatrix}$ A matritsaga teskari matritsani toping	$A^{-1}=\begin{pmatrix}1 & -2\\ -\frac{3}{2} & \frac{7}{2}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}1 & -2\\ -\frac{4}{2} & \frac{7}{2}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}5 & -2\\ -\frac{3}{2} & \frac{7}{2}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}1 & -4\\ -\frac{3}{2} & \frac{5}{2}\end{pmatrix}$
5.	$A=\begin{pmatrix}8 & 2\\ 7 & 2\end{pmatrix}$ A matritsaga teskari matritsani toping	$A^{-1}=\begin{pmatrix}1 & -1\\ -3,5 & 4\end{pmatrix}$	$A^{-1}=\begin{pmatrix}1 & -1\\ -3,5 & 3\end{pmatrix}$	$A^{-1}=\begin{pmatrix}1 & -1\\ -3 & 4\end{pmatrix}$	$A^{-1}=\begin{pmatrix}-2 & -1\\ -3 & 4\end{pmatrix}$

6.	$A=\begin{pmatrix}7 & 8\\ 2 & 6\end{pmatrix}$ A matritsaga teskari matritsani toping.	$A^{-1}=\frac{1}{26}\begin{pmatrix}6 & -8\\ -2 & 7\end{pmatrix}$	$A^{-1}=\frac{1}{26}\begin{pmatrix}3 & -8\\ -2 & 7\end{pmatrix}$	$A^{-1}=\frac{1}{26}\begin{pmatrix}6 & -3\\ -2 & 7\end{pmatrix}$	$A^{-1}=\frac{1}{26}\begin{pmatrix}6 & -8\\ -2 & 9\end{pmatrix}$
7.	$A=\begin{pmatrix}4 & 5\\ 4 & 6\end{pmatrix}$ A matritsaga teskari matritsani toping	$A^{-1}=\begin{pmatrix}1,5 & -1,25\\ -1 & 1\end{pmatrix}$	$A^{-1}=\begin{pmatrix}2,5 & -1,25\\ -1 & 1\end{pmatrix}$	$A^{-1}=\begin{pmatrix}1,5 & -1,25\\ -2 & 1\end{pmatrix}$	$A^{-1}=\begin{pmatrix}1,5 & -1,25\\ -1 & 2\end{pmatrix}$
8.	$A=\begin{pmatrix}7 & 4\\ 6 & 4\end{pmatrix}$ A matritsaga teskari matritsani toping	$A^{-1}=\begin{pmatrix}1 & -1\\ -\frac{6}{4} & \frac{7}{4}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}1 & -1\\ -\frac{3}{4} & \frac{2}{4}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}2 & -3\\ -\frac{6}{4} & \frac{7}{4}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}5 & -6\\ -\frac{6}{4} & \frac{7}{4}\end{pmatrix}$
9.	$A=\begin{pmatrix}3 & 1\\ 2 & 1\end{pmatrix}$ A matritsaga teskari matritsani toping	$A^{-1}=\begin{pmatrix}1 & -1\\ -2 & 3\end{pmatrix}$	$A^{-1}=\begin{pmatrix}2 & -1\\ -2 & 3\end{pmatrix}$	$A^{-1}=\begin{pmatrix}3 & -1\\ -2 & 3\end{pmatrix}$	$A^{-1}=\begin{pmatrix}4 & -1\\ -2 & 3\end{pmatrix}$
10.	$A=\begin{pmatrix}-1 & -6\\ 2 & 6\end{pmatrix}$ A matritsaga teskari matritsani toping.	$A^{-1}=\begin{pmatrix}1 & 1\\ -\frac{2}{6} & -\frac{1}{6}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}3 & 1\\ -\frac{2}{6} & -\frac{1}{6}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}1 & 2\\ -\frac{2}{6} & -\frac{1}{6}\end{pmatrix}$	$A^{-1}=\begin{pmatrix}1 & 1\\ -\frac{5}{6} & -\frac{1}{6}\end{pmatrix}$
11.	$A=\begin{pmatrix}6 & 4\\ 4 & 3\end{pmatrix}$ A matritsaga teskari matritsani toping.	$A^{-1}=\begin{pmatrix}1,5 & -2\\ -2 & 3\end{pmatrix}$	$A^{-1}=\begin{pmatrix}2 & -2\\ -2 & 3\end{pmatrix}$	$A^{-1}=\begin{pmatrix}3 & -2\\ -2 & 3\end{pmatrix}$	$A^{-1}=\begin{pmatrix}1,5 & -4\\ -2 & 3\end{pmatrix}$

12.	$A=\begin{pmatrix}7 & 8\\ 5 & 6\end{pmatrix}$ A matritsaga teskari matritsani toping.	$A^{-1}=\begin{pmatrix}3 & -4\\ -2,5 & 3,5\end{pmatrix}$	$A^{-1}=\begin{pmatrix}5 & -4\\ -2,5 & 3,5\end{pmatrix}$	$A^{-1}=\begin{pmatrix}3 & -4\\ -2,5 & 4,5\end{pmatrix}$	$A^{-1}=\begin{pmatrix}3 & -4\\ -3,5 & 3,5\end{pmatrix}$
13.	$A=\begin{pmatrix}12 & 8\\ 7 & 5\end{pmatrix}$ A matritsaga teskari matritsani toping.	$A^{-1}=\begin{pmatrix}\frac{5}{4} & -2\\ -\frac{7}{4} & 3\end{pmatrix}$	$A^{-1}=\begin{pmatrix}\frac{5}{4} & -4\\ -\frac{7}{4} & 3\end{pmatrix}$	$A^{-1}=\begin{pmatrix}\frac{5}{4} & -5\\ -\frac{7}{4} & 3\end{pmatrix}$	$A^{-1}=\begin{pmatrix}\frac{5}{4} & -2\\ -\frac{7}{4} & 7\end{pmatrix}$
14.	$A=\begin{pmatrix}6 & 2\\ 11 & 4\end{pmatrix}$ A matritsaga teskari matritsani toping.	$A^{-1}=\begin{pmatrix}2 & -1\\ -5,5 & 3\end{pmatrix}$	$A^{-1}=\begin{pmatrix}2 & -2\\ -5,5 & 3\end{pmatrix}$	$A^{-1}=\begin{pmatrix}2 & -1\\ -5,5 & 5\end{pmatrix}$	$A^{-1}=\begin{pmatrix}2 & -1\\ -5 & 4\end{pmatrix}$
15.	$A=\begin{pmatrix}11 & 10\\ 12 & 11\end{pmatrix}$ A matritsaga teskari matritsani toping.	$A^{-1}=\begin{pmatrix}11 & -10\\ -12 & 11\end{pmatrix}$	$A^{-1}=\begin{pmatrix}12 & -10\\ -12 & 11\end{pmatrix}$	$A^{-1}=\begin{pmatrix}11 & -12\\ -12 & 11\end{pmatrix}$	$A^{-1}=\begin{pmatrix}11 & -11\\ -12 & 12\end{pmatrix}$
16.	$A=\begin{pmatrix}8 & 10\\ 3 & 4\end{pmatrix}$ A matritsaga teskari matritsani toping.	$A^{-1}=\begin{pmatrix}2 & -5\\ -1,5 & 4\end{pmatrix}$	$A^{-1}=\begin{pmatrix}2 & -5\\ -1,6 & 4\end{pmatrix}$	$A^{-1}=\begin{pmatrix}2 & -6\\ -1,5 & 4\end{pmatrix}$	$A^{-1}=\begin{pmatrix}2 & -5\\ -1,5 & 6\end{pmatrix}$
17.	$A=\begin{pmatrix}1 & 2\\ 3 & 4\end{pmatrix}$	$A^{-1}=\begin{pmatrix}-2 & 1\\ 1,5 & -0,5\end{pmatrix}$	$A^{-1}=\begin{pmatrix}-2 & 1\\ 1 & 5\end{pmatrix}$	$A^{-1}=\begin{pmatrix}2 & 1\\ 1 & -0,5\end{pmatrix}$	$A^{-1}=\begin{pmatrix}-3 & 1\\ 2,5 & -0,5\end{pmatrix}$

	A matritsaga teskari matritsani toping				
18.	berilgan kamyob bo'lmagan matritsa uchun quyidagi nisbatlardan qaysi biri to'g'ri	$\left\|A^{-1}\right\| = \frac{1}{\|A\|}$	$\left\|A^{-1}\right\| = \|A\|$	$\left\|A^{-1}\right\| = \frac{2}{\|A\|}$	$\left\|A^{-1}\right\| = -\frac{1}{\|A\|}$
19.	berilgan kamyob bo'lmagan matritsa uchun quyidagi nisbatlardan qaysi biri to'g'ri	$\left(A^{m}\right)^{-1} = \left(A^{-1}\right)^{m}$	$\left(A^{m}\right)^{-1} = \left(A^{-1}\right)^{-m}$	$\left(A^{m}\right)^{-1} = \left(A\right)^{m}$	$\left(A^{m}\right)^{-1} = \left(A^{-2}\right)^{m}$
20.	$y' + xy = xy^3$ berilgan kamyob bo'lmagan matritsa uchun quyidagi nisbatlardan qaysi biri to'g'ri	$\left(A^{-1}\right)^{-1} = A$	$\left(A^{-1}\right)^{-1} = A^{-1}$	$\left(A^{-1}\right)^{-1} = A^{-2}$	$\left(A^{-1}\right)^{-1} = A^{2}$
21.	berilgan kamyob bo'lmagan matritsa uchun quyidagi nisbatlardan qaysi biri to'g'ri	$\left(A^{-1}\right)^{T} = \left(A^{T}\right)^{-1}$	$\left(A^{-1}\right)^{T} = \left(A^{T}\right)$	$\left(A^{-1}\right)^{T} = \left(\left(A^{T}\right)^{T}\right)^{-1}$	$\left(A^{-1}\right)^{T} = \left(A^{T}\right)^{-2}$
22.	berilgan kamyob bo'lmagan matritsa uchun quyidagi nisbatlardan qaysi biri to'g'ri	$\left(A \cdot B\right)^{-1} = B^{-1} \cdot A^{-1}$	$\left(A \cdot B\right)^{-1} = A^{-1} \cdot B^{-1}$	$\left(A \cdot B\right)^{-1} = B \cdot A$	$\left(A \cdot B\right)^{-1} = A \cdot B$

№	savol	A	B	C	D
	Chiziqli tenglamalar sistemasini bo'g'in qilish uchun:	Uning asosiy matritsasi darajasi uzatilgan matritsaning darajasiga A teng bo'lishi zarur A $(A\|B)$ yetarlidir .	Sistemaning tenglamalar soni noma'lumlar soniga to'g'ri kelishi zarur A yetarli.	Asosiy matritsaning determinanti noldan farq qilishi zarur A yetarli.	Sistemaning tenglamalar soni noma'lumlar sonidan ko'p bo'lishi zarur A yetarli
2.	Quyidagi gaplarning qaysi biri chiziqli tenglamalar sistemasi uchun to'g'ri:	Agar $rangA \neq rang(A\|B)$ sistemai hamkori	Agar $rangA = rang(A\|B)$ sistemai hamkori	U $rangA < rang(A\|B)$ holda tizim yagona yechimga ega bo'lsa	Agar $rangA > rang(A\|B)$ keyin tizim yagona yechimga ega bo'lgan
3.	Quyidagi gaplarning qaysi biri chiziqli tenglamalar sistemasi uchun to'g'ri:	$rangA = rangB = r = n$ Agar tizim yagona yechimga ega bo'lsa	bo'lsa $rangA = rang(A\|\mathrm{B})$, u holda sistema cheksiz sonli yechimlarga ega	Agar $rangA = rang(A\|B)$, u holda tizimning echimlari №	U $rangA \neq rang(A\|B)$ holda tizim yagona yechimga ega bo'lsa
4.	Quyidagi gaplarning qaysi biri chiziqli tenglamalar sistemasi uchun to'g'ri:	U $rangA = rang\ B = r < n$ holda sistema cheksiz sonli yechimlarga ega bo'lsa	Agar $rangA = rang(A\|B)$ u holda tizimning echimlari №	U $rangA \neq rang(A\|B)$ holda tizim yagona yechimga ega bo'lsa	U $rangA < rang(A\|B)$ holda tizim yagona yechimga ega bo'lsa
5.	Quyidagi gaplarning qaysi biri chiziqli tenglamalar sistemasi uchun to'g'ri	Agar $rangA < rang(A\|B)$ u holda tizimning echimlari №	U $rangA < rang(A\|B)$ holda tizim yagona yechimga ega bo'lsa	U $rangA \neq rang(A\|B)$ holda tizim yagona yechimga ega bo'lsa .	agar $rangA = rang(A\|B)$, u holda tizimning echimlari №

6.	$\begin{cases} x_1 + 2x_2 - x_3 = 3, \\ 2x_1 - x_2 + 2x_3 = -1, \\ x_1 + 3x_2 - x_3 = 6. \end{cases}$ $x_1 = ?$	-1	2	-3	4
7.	$\begin{cases} x + 5y - z = 3, \\ 2x + 4y - 3z = 2, \\ 3x - y - 3z = -7 \end{cases}$ Asosiy matritsa determinantini toping	-16	18	-20	12
8.	$\begin{cases} 2x_1 + x_2 - x_3 = 2, \\ 2x_1 + 2x_2 - 3x_3 = -3, \\ x_1 + 2x_2 - 2x_3 = -5. \end{cases}$ $x_1 = ?$	3	4	15	24
9.	$\begin{cases} x + 5y - z = 3, \\ 2x + 4y - 3z = 2, \\ 3x - y - 3z = -7 \end{cases}$ Δ_x	64	48	82	32
10.	$\begin{cases} 2x_1 + 7x_2 - x_3 = 10, \\ x_1 + 2x_2 + x_3 = 2, \\ 3x_1 - 5x_2 + 3x_3 = -5. \end{cases}$ $x_1 = ?$	1	4	7	8
11.	$\begin{cases} x_1 + 2x_2 + 3x_3 = 5, \\ 3x_1 - 2x_2 + 3x_3 = -1, \\ 2x_1 + 3x_2 - 2x_3 = 8. \end{cases}$ $x_1 = ?$	1	3	4	8

12.	$\begin{cases} 2x_1 - 2x_2 + x_3 = 8, \\ x_1 + 3x_2 + x_3 = -3, \\ 3x_1 + 2x_2 - 2x_3 = -5. \end{cases}$ $x_1 = ?$	1	2	-3	4
13.	$\begin{cases} x_1 + 2x_2 + x_3 = 4, \\ 4x_1 + 5x_2 + 6x_3 = 15, \\ 7x_1 + 8x_2 = 15. \end{cases}$ $x_1 = ?$	1	2	-3	-1
14.	$\begin{cases} 2x_1 + x_2 + 3x_3 = 12, \\ x_1 + 2x_2 - x_3 = 4, \\ 3x_1 + x_2 - 4x_3 = 0. \end{cases}$ $x_1 = ?$	2	3	5	6
15.	$\begin{cases} 2x + y - 3z = 7, \\ 2x + 4y - 3z = -2, \\ x + 5y - 3z = -9. \end{cases}$ Δ_X .	-36	-46	-38	48
16.	Tizim nechta yechimga ega? $\begin{cases} x - y - z = 2, \\ -2x + y + 7z = -1, \\ -3x + 2y + 8z = -3 \end{cases}$	Cheksiz ko'p	2	3	1
17.	$\begin{cases} 2x + y - 3z = 7, \\ 2x + 4y - 3z = -2, \\ x + 5y - 3z = -9. \end{cases}$ Δ_Z .	6	5	-7	12

18.	$\begin{cases} 2x + y - 3z = 7, \\ 2x + 4y - 3z = -2, \\ x + 5y - 3z = -9. \end{cases}$ Δy	27	24	32	42
19.	$\begin{cases} 2x + y - 3z = 7, \\ 2x + 4y - 3z = -2, \\ x + 5y - 3z = -9. \end{cases}$ Asosiy matritsa determinantini toping	-9	10	24	32
20.	$y' + 2xy = xy^3$ $\begin{cases} x_1 - 3x_2 - x_3 = 1, \\ 2x_1 + x_2 + x_3 = -7, \\ 2x_1 - x_2 - 3x_3 = 5. \end{cases}$ $x_1 = ?$	-2	5	7	2
21.	$\begin{cases} x_1 - 3x_2 - x_3 = 1, \\ 2x_1 + x_2 + x_3 = -7, \\ 2x_1 - x_2 - 3x_3 = 5. \end{cases}$ $x_3 = ?$	-3	4	-5	16
22.	$\begin{cases} x_1 - 3x_2 - x_3 = 1, \\ 2x_1 + x_2 + x_3 = -7, \\ 2x_1 - x_2 - 3x_3 = 5. \end{cases}$ $x_2 = ?$	0	4	-5	1
23.	$\begin{cases} 3x_1 - x_2 + x_3 = -11, \\ 5x_1 + x_2 + 2x_3 = 8, \\ x_1 + 2x_2 + 4x_3 = 16. \end{cases}$ $x_3 = ?$	-1	2	3	7
24.	Sistemaning yechimlari yig'indisi 10 dan qanchaga	4	5	7	2

	kichik? $\begin{cases} x_1 + x_2 + x_3 = 6, \\ 2x_1 - x_2 + x_3 = 3, \\ x_1 + x_2 - x_3 = 0. \end{cases}$				
25.	Sistemaning yechimlari yig'indisi 18 dan qanchaga kichik? $\begin{cases} x_1 + x_2 + x_3 = 6, \\ 2x_1 - x_2 + x_3 = 3, \\ x_1 + x_2 - x_3 = 0. \end{cases}$	12	8	14	9

№	Savol	A	B	C	D
	Tenglamalar sistemasini yeching $\begin{cases} x_1 - x_2 + x_3 = 12, \\ 2x_1 + 3x_2 - x_3 = 13, \\ 3x_2 + 4x_3 = 5, \end{cases}$	$X = \begin{pmatrix} 9 \\ -1 \\ 2 \end{pmatrix}$	$X = \begin{pmatrix} 8 \\ -1 \\ 2 \end{pmatrix}$	$X = \begin{pmatrix} 9 \\ 3 \\ 2 \end{pmatrix}$	$X = \begin{pmatrix} 7 \\ 3 \\ 2 \end{pmatrix}$
2.	Tenglamalar sistemasini yeching $\begin{cases} x_1 - x_2 + 2x_3 + 2x_4 = 2, \\ \quad - x_2 - x_3 + 2x_4 = 7, \\ -x_1 + 2x_2 \quad - 2x_4 = -7, \\ x_1 + 2x_2 - 2x_3 - x_4 = 1. \end{cases}$	$X = \begin{pmatrix} 1 \\ -1 \\ -2 \\ 2 \end{pmatrix}$	$X = \begin{pmatrix} 3 \\ -1 \\ -2 \\ 2 \end{pmatrix}$	$X = \begin{pmatrix} 1 \\ -4 \\ -2 \\ 2 \end{pmatrix}$	$X = \begin{pmatrix} 1 \\ -3 \\ -5 \\ 2 \end{pmatrix}$
3.	Tenglamalar sistemasini yeching $\begin{cases} 3x_1 + 5x_2 - 4x_3 + 2x_4 = 9, \\ 5x_1 + 3x_2 + 2x_3 - 7x_4 = -11, \\ 7x_1 - 4x_2 + 5x_3 - 3x_4 = 2, \\ 4x_1 + 2x_2 - 3x_3 + 4x_4 = 15. \end{cases}$	$X = \begin{pmatrix} 1 \\ 2 \\ 3 \\ 4 \end{pmatrix}$	$X = \begin{pmatrix} 1 \\ 4 \\ 3 \\ 4 \end{pmatrix}$	$X = \begin{pmatrix} 3 \\ 2 \\ 3 \\ 4 \end{pmatrix}$	$X = \begin{pmatrix} 1 \\ 2 \\ 6 \\ 4 \end{pmatrix}$

4.	Tenglamalar sistemasini yeching $\begin{cases} 2x_1 + x_2 - x_3 + x_4 = 1, \\ 3x_1 - 2x_2 + 2x_3 - 3x_4 = 2, \\ 5x_1 + x_2 - x_3 + 2x_4 = -1, \\ 4x_1 + 2x_2 - 2x_3 + 2x_4 = 4. \end{cases}$	Sistema birgalikda emas	$X = \begin{pmatrix} 3 \\ -1 \\ -2 \\ 2 \end{pmatrix}$	$X = \begin{pmatrix} 1 \\ -4 \\ -2 \\ 2 \end{pmatrix}$	$X = \begin{pmatrix} 1 \\ -3 \\ -5 \\ 2 \end{pmatrix}$
5.	Tenglamalar sistemasini yeching $\begin{cases} 2x_1 + x_2 - 4x_3 - x_4 = 0, \\ x_1 + x_2 - 3x_3 + 2x_4 = -1, \\ x_1 + 3x_2 - 7x_3 + 2x_4 = -5, \\ 6x_1 + 3x_2 - 12x_3 - 3x_4 = 5. \end{cases}$	Sistema birgalikda emas	$X = \begin{pmatrix} 1 \\ 2 \\ 3 \\ 4 \end{pmatrix}$	$X = \begin{pmatrix} 1 \\ 4 \\ 3 \\ 4 \end{pmatrix}$	$X = \begin{pmatrix} 3 \\ 2 \\ 3 \\ 4 \end{pmatrix}$
6.	Tenglamalar sistemasini yeching $\begin{cases} 5x_1 - x_2 + 2x_3 = 9, \\ 2x_1 + x_2 + 4x_3 = 16, \\ x_1 - 3x_2 - 6x_3 = -23. \end{cases}$	$X = \begin{pmatrix} 1 \\ 2 \\ 3 \end{pmatrix}$	$X = \begin{pmatrix} 8 \\ -1 \\ 2 \end{pmatrix}$	$X = \begin{pmatrix} 9 \\ 3 \\ 2 \end{pmatrix}$	$X = \begin{pmatrix} 7 \\ 3 \\ 2 \end{pmatrix}$
7.	Tenglamalar sistemasini yeching $\begin{cases} x_1 - 2x_2 + 2x_3 = -2, \\ 4x_1 + x_2 + 4x_3 = 15, \\ x_1 - 3x_2 + 8x_3 = 20. \end{cases}$	$X = \begin{pmatrix} 2 \\ 3 \\ 1 \end{pmatrix}$	$X = \begin{pmatrix} 6 \\ -1 \\ 2 \end{pmatrix}$	$X = \begin{pmatrix} 9 \\ 3 \\ 2 \end{pmatrix}$	$X = \begin{pmatrix} 7 \\ 3 \\ 2 \end{pmatrix}$

8.	Tenglamalar sistemasini yeching $\begin{cases} x_1+4x_2+2x_3=21, \\ 2x_1+3x_2+4x_3=26, \\ x_1-3x_2-9x_3=-29. \end{cases}$	$X=\begin{pmatrix} 1 \\ 4 \\ 2 \end{pmatrix}$	$X=\begin{pmatrix} 6 \\ -4 \\ 2 \end{pmatrix}$	$X=\begin{pmatrix} 9 \\ 5 \\ 2 \end{pmatrix}$	$X=\begin{pmatrix} 7 \\ 3 \\ 2 \end{pmatrix}$
9.	Tenglamalar sistemasini yeching $\begin{cases} x_1+x_2+2x_3=3, \\ 2x_1+5x_2+4x_3=3, \\ x_1-4x_2-7x_3=-19. \end{cases}$	$X=\begin{pmatrix} -2 \\ -1 \\ 3 \end{pmatrix}$	$X=\begin{pmatrix} -6 \\ -4 \\ -2 \end{pmatrix}$	$X=\begin{pmatrix} 9 \\ -5 \\ 2 \end{pmatrix}$	$X=\begin{pmatrix} 7 \\ 3 \\ 2 \end{pmatrix}$
10.	Tenglamalar sistemasini yeching $\begin{cases} x_1+2x_2+2x_3=-3, \\ 2x_1+5x_2-4x_3=20, \\ 3x_1-4x_2-7x_3=10. \end{cases}$	$X=\begin{pmatrix} -1 \\ 2 \\ -3 \end{pmatrix}$	$X=\begin{pmatrix} -6 \\ -4 \\ -2 \end{pmatrix}$	$X=\begin{pmatrix} 9 \\ -5 \\ 2 \end{pmatrix}$	$X=\begin{pmatrix} 7 \\ 3 \\ 2 \end{pmatrix}$
11.	Tenglamalar sistemasini yeching $\begin{cases} x_1+3x_2+2x_3=7, \\ 4x_1+2x_2-4x_3=-10, \\ 3x_1-4x_2-8x_3=-22. \end{cases}$	$X=\begin{pmatrix} 2 \\ -1 \\ 4 \end{pmatrix}$	$X=\begin{pmatrix} -6 \\ -4 \\ -2 \end{pmatrix}$	$X=\begin{pmatrix} 9 \\ -5 \\ 2 \end{pmatrix}$	$X=\begin{pmatrix} 7 \\ 3 \\ 2 \end{pmatrix}$
12.	Tenglamalar sistemasini yeching $\begin{cases} 2x_1+x_2+2x_3=9, \\ x_1+2x_2-4x_3=-7, \\ 3x_1-2x_2-8x_3=-5. \end{cases}$	$X=\begin{pmatrix} 3 \\ -1 \\ 2 \end{pmatrix}$	$X=\begin{pmatrix} -6 \\ -4 \\ -2 \end{pmatrix}$	$X=\begin{pmatrix} 9 \\ -5 \\ 2 \end{pmatrix}$	$X=\begin{pmatrix} 7 \\ 3 \\ 2 \end{pmatrix}$
13.	Tenglamalar sistemasining yechimlari yig'indisini toping	0	7	18	24

	$\begin{cases} 3x_1+7x_2+2x_3=13, \\ x_1+8x_2-4x_3=26, \\ 4x_1-2x_2+8x_3=-24. \end{cases}$				
14.	Tenglamalar sistemasining yechimlari yig'indisini toping $\begin{cases} x_1+7x_2+2x_3=26, \\ x_1+x_2-4x_3=14, \\ 4x_1-2x_2+x_3=-2. \end{cases}$	4	8	12	24
15.	Tenglamalar sistemasining yechimlari yig'indisini toping $\begin{cases} x_1+7x_2+2x_3=-3, \\ x_1+x_2-4x_3=-15, \\ 4x_1-2x_2+x_3=20. \end{cases}$	5	25	12	24
16.	Tenglamalar sistemasining yechimlari yig'indisini toping $\begin{cases} x_1+7x_2+2x_3=3, \\ x_1+x_2-4x_3=15, \\ 4x_1-2x_2+x_3=3. \end{cases}$	0	25	12	24
17.	Tenglamalar sistemasining yechimlarini toping $\begin{cases} x_1+7x_2+2x_3=3, \\ x_1+x_2-4x_3=15, \\ 4x_1-2x_2+x_3=3. \end{cases}$	-6	7	9	27

18.	Tenglamalar sistemasining yechimlarini toping $\begin{cases} 2x_1 + x_2 + 2x_3 = 9, \\ x_1 + 2x_2 - 4x_3 = -7, \\ 3x_1 - 2x_2 - 8x_3 = -5. \end{cases}$	-6	16	24	38
19.	Tenglamalar sistemasining yechimlarini toping $\begin{cases} x_1 + 3x_2 + 2x_3 = 7, \\ 4x_1 + 2x_2 - 4x_3 = -10, \\ 3x_1 - 4x_2 - 8x_3 = -22. \end{cases}$	-8	24	64	34
20.	Tenglamalar sistemasining yechimlarini toping $y' + xy = xy^3$ $\begin{cases} x_1 + 2x_2 + 2x_3 = -3, \\ 2x_1 + 5x_2 - 4x_3 = 20, \\ 3x_1 - 4x_2 - 7x_3 = 10. \end{cases}$	6	52	68	28

№	savol	A	B	C	D
1.	Vektorning boshlanish $\vec{a}=\begin{pmatrix}7\\4\end{pmatrix}$ nuqtasiga vektorning boshlanish nuqtasiga o'tkazilsa $A(-2,3)$, u holda qaysi nuqtada vektorning oxiri o'tadi	$(5;7)$	$(-5;7)$	$(5;-7)$	$(7;5)$
2.	Vektorning boshlanish $\vec{a}=\begin{pmatrix}7\\6\end{pmatrix}$ nuqtasiga vektorning boshlanish nuqtasiga ko'chirilsa $A(-2,3)$, u holda qaysi nuqtada uning oxiri o'tadi .	$(5;9)$	$(9;5)$	$(-5;7)$	$(5;-7)$
3.	Vektorning boshlanish $\vec{a}=\begin{pmatrix}8\\6\end{pmatrix}$ nuqtasiga vektorning boshlanish nuqtasiga o'tkazilsa $A(-2,3)$, u holda qaysi nuqtada vektorning oxiri o'tadi	$(6;9)$	$(5;9)$	$(9;5)$	$(-5;7)$

4.	Vektorning boshlanish $\vec{a}=\begin{pmatrix}9\\5\end{pmatrix}$ nuqtasiga vektorning boshlanish nuqtasiga o'tkazilsa $A(-2,3)$, u holda qaysi nuqtada vektorning oxiri o'tadi	(7;8)	(6;9)	(5;9)	(9;5)
5.	Agar vektorning boshi vektorning $\vec{b}=\begin{pmatrix}2\\-1\end{pmatrix}$ oxiriga ko'ra nuqtaga ko'chirilsa $A(3,2)$, u holda qaysi nuqtada vektorning boshi ko'chadi	(1;3)	(6;9)	(5;9)	(9;5)
6.	Agar vektorlar qanday bog'liqlikda bo'ladi $\vec{a},\vec{b},\vec{c}$ $\begin{vmatrix}x_1 & y_1 & z_1\\x_2 & y_2 & z_2\\x_3 & y_3 & z_3\end{vmatrix}=0$	Koplanar	Parallel	Perpendikulyar	Moslash
7.	Vektorlar $\vec{a}=2\vec{i}+3\vec{j}-2\vec{k}$ A tomonidan hosil bo'lgan	$\sqrt{106}$ sq.ed.	$2\sqrt{106}$ sq.ed.	$\sqrt{126}$ kv. m. Ed	$\sqrt{146}$ sq.ed.

	parallelogrammaning maydonini toping $\vec{b}=\vec{i}-3\vec{j}+\vec{k}$				
8.	$\vec{a},\vec{b},\vec{c}$ Agarda vektorlar qanday bog'liqlikda bo'ladi $\begin{vmatrix} x_1 & y_1 & z_1 \\ x_2 & y_2 & z_2 \\ x_3 & y_3 & z_3 \end{vmatrix} \neq 0$?	komplanar bo'lmagan	Koplanar	Parallel	Perpendikulyar
9.	n vektorlar qaysi qiymatda $\vec{a}=(n;5;4)$ Behuda $\vec{b}=(1;2;-2)$ orthogonal?	-2	3	-5	4
10.	qaysi n vektorlar qiymatda $\vec{a}=(3;n;5)$ A $\vec{b}=(2;-4;2)$ orthogonal?	4	-2	3	-5
11.	Qoyil $A(2;0;4)$, , , $B(6;3;5)$, . $C(2;4;5)$ $D(-5;6;3)$ Vektorni toping $\vec{a}=\overrightarrow{AB}+\overrightarrow{CD}$.	$\vec{a}=(-3;5;-1)$	$\vec{a}=(3;5;-1)$	$\vec{a}=(-3;-5;-1)$	$\vec{a}=(3;5;1)$

12.	Qoyil $A(2;0;4)$, , , $B(5;2;4)$, . $C(-2;6;5)$ $D(-5;6;3)$ Vektorni toping $\vec{a}=\overrightarrow{AB}+\overrightarrow{CD}$.	$\vec{a}=(0;2;-2)$	$\vec{a}=(-3;5;-1)$	$\vec{a}=(3;5;-1)$	$\vec{a}=(-3;-5;-1)$
13.	Qoyil $A(1;1;2)$, , , $B(6;3;5)$, . $C(2;4;5)$ $D(8;6;7)$ Vektorni toping $\vec{a}=\overrightarrow{AB}+\overrightarrow{CD}$.	$\vec{a}=(11;4;5)$	$\vec{a}=(0;2;-2)$	$\vec{a}=(-3;5;-1)$	$\vec{a}=(3;5;-1)$
14.	Qoyil $A(1;1;2)$, , , $B(6;5;5)$, . $C(2;3;1)$ $D(7;6;7)$ Vektorni toping $\vec{a}=\overrightarrow{AB}+\overrightarrow{CD}$.	$\vec{a}=(10;7;9)$	$\vec{a}=(3;5;-1)$	$\vec{a}=(-3;-5;-1)$	$\vec{a}=(3;5;1)$
15.	Keling $A(3;1;2)$, , , $B(7;3;5)$ $C(2;1;4)$ $D(9;7;5)$ vektorni toping $\vec{a}=\overrightarrow{AB}+\overrightarrow{CD}$.	$\vec{a}=(11;8;4)$	$\vec{a}=(10;7;9)$	$\vec{a}=(3;5;-1)$	$\vec{a}=(-3;-5;-1)$
16.	Qoyil $A(1;2;2)$, , , $B(9;6;5)$, . $C(3;1;4)$ $D(8;7;5)$ Vektorni toping $\vec{a}=\overrightarrow{AB}+\overrightarrow{CD}$.	$\vec{a}=(13;10;4)$	$\vec{a}=(11;8;4)$	$\vec{a}=(10;7;9)$	$\vec{a}=(3;5;-1)$

17.	Vektorlarning skalyar mahsulini toping $\vec{a} = 3\vec{i} + 8\vec{i} + \vec{k}$; $\vec{b} = 6\vec{i} - 3\vec{j} + 3\vec{k}$	-3	21	12	4
18.	Vektorlarning skalyar mahsulini toping $\vec{a} = 8\vec{i} + 3\vec{i} + 3\vec{k}$; $\vec{b} = 5\vec{i} - 3\vec{j} + 3\vec{k}$	40	26	34	46
19.	Vektorlarning skalyar mahsulini toping $y' + xy = xy^3$ $\vec{a} = 7\vec{i} + 2\vec{i} + 3\vec{k}$; $\vec{b} = 2\vec{i} - 2\vec{j} + 3\vec{k}$	19	26	34	46
20.	Vektorlarning vektorli mahsulini toping $\vec{a} = 2\vec{i} + 3\vec{i} + \vec{k}$; $\vec{b} = 4\vec{i} - 3\vec{j} + 3\vec{k}$	$\left[\vec{a};\vec{b}\right] = 12\vec{i} - 2\vec{j} - 18\vec{k}$	$\left[\vec{a};\vec{b}\right] = 12\vec{i} - 6\vec{j} - 18\vec{k}$	$\left[\vec{a};\vec{b}\right] = 12\vec{i} - 2\vec{j} - 12\vec{k}$	$\left[\vec{a};\vec{b}\right] = 12\vec{i} - 12\vec{j} - 18\vec{k}$
21.					
22.					
23.					

24.					
25.					

№	Savol	A	B	C	D
26.	Berilgan chiziqli bo'shliqda kiritilgan chiziqli operatsiyalarga nisbatan yopiq berilgan chiziqli bo'sh joyning quyi to'plami:	chiziqli pastki o'nlik			
27.	Chiziqli bo'shliqda $C_{[a, b]}$ funksiyalarning bir segmentda uzluksizligi [a, b], funksiyalar sistemasi chiziqli mAsosiyqil bo'lib:	• 1, x bo'lmasa , x C			
28.	Uchinchi element x 2 + 7x + 9 x_{3+3} dan yuqori bo'lmagan o'zgaruvchi x gradusning chiziqli bo'shlig'ida $K^3[x]$ polinomlari 1, x, x^2, x^3 koordinatalari asosida mavjud:	• 3, 7, 1, 9			
29.	. Uchinchi element$_{3x2}$ + 8x + 4 x 3 + 5 dan yuqori bo'lmagan	• 5, 8, 3, 4			

	o'zgaruvchi x gradusning chiziqli bo'shlig'ida K ^{3}[x] polinomlari 1, x, x 2, x^3 koordinatalari asosida bor:				
30.	Uchinchi element 5x ^{2} $^{+2}$ x + 4 x_3 + ^{3} dan yuqori bo'lmagan o'zgaruvchi x gradusning chiziqli bo'shlig'ida K 3[x] polinomlari 1, x, x^2, x^3 koordinatalari asosida bor:	• 3, 2, 5, 4			
31.	Evklid bo'shlig'ida, o'tish matritsasi U bo'lgan bir orthonormed asosdan boshqasiga o'tganda, chiziqli operatorning matritsasining transformatsiya formulasini quyidagicha yozish mumkin:	: $A_1 = U^TAU$			

32.	Chiziqli bo'shliq V_2 da har qanday ikki kollinear vektor:	• : chiziqli bog'liq			
33.	Chiziqli arifmetik bo'shliqda vektor sistemasi $e_1 = (1, 0, ..., 0)$, $e_2 = (0, 1, 0, ..., 0)$, ..., $e_n = (0, 0, ..., 1)$ bo'ladi:	• : Chiziqli mAsosiyqil			
34.	$\overset{\vee}{a} = (1;-3;1)$, $\overset{\vee}{b} = (4;2;-1)$, $\overset{\vee}{c} = (2;3;5)$. Berilgan vektor sistemasi uchun qaysi gap rost?	Asosni vektor tizimi tashkil etadi	Vektor sistemasi chiziqli bog'liq	Vektor tizimi orthogonal	Vektor tizimi ortonunormal
35.	$\overset{\vee}{a} = (1; -3; 2)$, $\overset{\vee}{b} = (-1; 2; -4)$, $\overset{\vee}{c} = (2; 3; 5)$. Berilgan vektor sistemasi uchun qaysi gap rost?	Asosni vektor tizimi tashkil etadi	Vektor sistemasi chiziqli bog'liq	Vektor tizimi orthogonal	Vektor sistemasi orthonormal i
36.	$\vec{a} = (3; 4; 5)$, $\vec{b} = (5; 6; 7)$, $\vec{c} = (5; 6; 7)$ Berilgan vektor sistemasi uchun qaysi gap rost?	Vektor sistemasi chiziqli bog'liq	Asosni vektor tizimi tashkil etadi	Vektor tizimi orthogonal	Vektor tizimi ortonunormal

37.	$\vec{a}=(3;1;\ 2)$, $\vec{b}=(2;\ 6;\ 4)$, $\vec{c}=(3;\ 1;\ 2)$ Berilgan vektor sistemasi uchun qaysi gap rost?	Vektor sistemasi chiziqli bog'liq	Asosni vektor tizimi tashkil etadi	Vektor tizimi orthogonal	Vektor tizimi ortonunormal
38.	$\vec{a}=(2;\ -3;\ 1)$, $\vec{b}=(-2;\ 2;-1)$, $\vec{c}=(2;\ 3;\ 5)$. Berilgan vektor sistemasi uchun qaysi gap rost?	Asosni vektor tizimi tashkil etadi	Vektor sistemasi chiziqli bog'liq	Vektor tizimi orthogonal	Vektor tizimi ortonunormal
39.	$\vec{a}=(2;-3;\ 1)$, $\vec{b}=(-2;\ 2;\ -1)$, $\vec{c}=(2;\ 3;\ 5)$. Berilgan vektor sistemasi uchun qaysi gap rost?	Asosni vektor tizimi tashkil etadi	Vektor sistemasi chiziqli bog'liq	Vektor tizimi orthogonal	Vektor tizimi ortonunormal
40.	$\vec{a}=(2;-4;3)$, $\vec{b}=(-2;2;-2)$, $\vec{c}=(2;3;1)$. Berilgan vektor sistemasi uchun qaysi gap rost?	Asosni vektor tizimi tashkil etadi	Vektor sistemasi chiziqli bog'liq	Vektor tizimi orthogonal	Vektor tizimi ortonunormal
41.	$\vec{a}=(6;\ 2;\ 4)$, $\vec{b}=(3;5;\ 7)$, $\vec{c}=(3;1;\ 2)$	Vektor sistemasi chiziqli bog'liq	Asosni vektor tizimi tashkil etadi	Vektor tizimi orthogonal	Vektor tizimi ortonunormal

	Berilgan vektor sistemasi uchun qaysi gap rost?				
42.	$\vec{e}_1 = \left(n; \frac{3}{7}; \frac{6}{7} \right)$, $\vec{e}_2 = \left(\frac{3}{7}; \frac{6}{7}; -\frac{2}{7} \right)$, $\vec{e}_3 = \left(\frac{6}{7}; -\frac{2}{7}; \frac{3}{7} \right)$ Berilgan vektor sistemasi orthonormal qaysi qiymatida n ning bo'lgan?	-2/7	4	-7	3/7

43.	$\vec{e}_1=\left(\frac{2}{3};\frac{1}{3};\frac{2}{3}\right)$, $\vec{e}_2=\left(-\frac{1}{3};n;\frac{2}{3}\right)$, $\vec{e}_3=\left(-\frac{2}{3};-\frac{2}{3};\frac{1}{3}\right)$ Berilgan vektor sistemasi orthonormal qaysi qiymatida n ning bo'lgan?	-2/3	-2/7	4	-7

44.	$\vec{e}_1=\left(\frac{2}{3};-\frac{1}{3};\mathrm{n}\right)$, $\vec{e}_2=\left(-\frac{1}{3};\frac{2}{3};\frac{2}{3}\right)$, $\vec{e}_3=\left(\frac{2}{3};-\frac{2}{3};-\frac{1}{3}\right)$ Berilgan vektor sistemasi orthonormal n ning qaysi qiymatida bo'lgan?	2/3	3/5	5/7	8/9
45.	$\vec{a}=(c;\,1;\,1)$, $\vec{b}=(0;\,c;\,1)$, $\vec{c}=(0;\,0;\,c)$	$c\neq 0$	$c=0$	$c=1$	$c=-1$

	Berilgan vektor sistemasi orthonormal qaysi qiymatida n ning bo'lgan?				

№	Savol	A	B	C	D
	Aa = (1/x, y) ifodasi C belgilangan A: R ® 2 R^2 mappingi:	Chiziqli bo‘lmagan	Chiziqli	Bir xil	Nol
2.	. Agar A operatori, Evklid bo'shlig'ida harakat qilsa, orthonormed asosni orthonormed asosga tarjima qilsa, u holda bu operator	orthogonal	Chiziqli bo‘lmagan	Nol	Oraliq bo‘lmagan
3.	Chiziqli bo'shliqdagi nol bo'lmagan vektor x chiziqli operatorning eigen vektori deyiladi A: L ® L agar biror haqiqiy son uchun aloqa ushlab tursa k	Ax=кx			
4.	Nol bo'lmagan vektorlarning har qanday orthogonal sistemasi	Chiziqli mAsosiyqil	Chiziqli bog'liq	standartizatsiyalangan	
5.	Agar asoslardagi chiziqli A operator matrislarga $\{\vec{e}_1,\vec{e}_2,...,\vec{e}_n\}$	$A^* = C^{-1}AC$ munosabat o‘rinli bo‘ladi.	$A^* = CAC^{-1}$ munosabat o‘rinli bo‘ladi.	$A^* = CAC$ munosabat o‘rinli bo‘ladi.	$A^* = ACA^{-1}$ munosabat o‘rinli bo‘ladi.

	$\left\{\overrightarrow{e_1^*}, \overrightarrow{e_2^*}, ..., \overrightarrow{e_n^*}\right\}$ to'g'ri kelsa A A A^* , u holda:				
6.	A Kosmosdagi chiziqli operator R^3 matritsaga ega bo'lsin $A = \begin{pmatrix} 3 & 2 & 4 \\ -1 & 5 & 6 \\ 1 & 8 & 2 \end{pmatrix}$ asosda $\{e_1, e_2, e_n\}$ A $x = 4\vec{e}_1 - 3\vec{e}_2 + \vec{e}_3$. . $y = A(x)$	$y = 10\vec{e}_1 - 13\vec{e}_2 - 18\vec{e}_3$	$y = 11\vec{e}_1 - 13\vec{e}_2 - 14\vec{e}_3$	$y = 8\vec{e}_1 - 13\vec{e}_2 - 18\vec{e}_3$	$y = 10\vec{e}_1 - 15\vec{e}_2 - 18\vec{e}_3$
7.	A Kosmosdagi chiziqli operator R^3 matritsaga ega bo'lsin $A = \begin{pmatrix} 2 & -2 & 4 \\ 1 & 5 & 1 \\ 1 & 3 & 2 \end{pmatrix}$ asosda $\{e_1, e_2, e_n\}$ A $x = 4\vec{e}_1 - 3\vec{e}_2 + \vec{e}_3$. . $y = A(x)$	$y = 18\vec{e}_1 - 10\vec{e}_2 - 3\vec{e}_3$	$y = 18\vec{e}_1 - 15\vec{e}_2 - 3\vec{e}_3$	$y = 20\vec{e}_1 - 13\vec{e}_2 - 13\vec{e}_3$	$y = 12\vec{e}_1 - \vec{e}_2 - 3\vec{e}_3$
8.	A Kosmosdagi chiziqli operator R^3 matritsaga ega bo'lsin	$y = 4\vec{e}_1 + 5\vec{e}_2 + \vec{e}_3$	$y = \vec{e}_1 - 15\vec{e}_2 - 3\vec{e}_3$	$y = 2\vec{e}_1 - 3\vec{e}_2 - 13\vec{e}_3$	$y = 2\vec{e}_1 - 7\vec{e}_2 - 3\vec{e}_3$

	$A=\begin{pmatrix}1 & -2 & 4\\ 4 & 5 & 2\\ 1 & 3 & 2\end{pmatrix}$ asosda A $\{e_1, e_2, e_n\}$ $x=4\vec{e}_1-3\vec{e}_2+\vec{e}_3$. . $y=A(x)$				
9.	A Kosmosdagi chiziqli operator R^3 matritsaga ega bo'lsin $A=\begin{pmatrix}2 & -2 & 4\\ 4 & -2 & 2\\ -3 & 3 & 2\end{pmatrix}$ asosda A $\{e_1, e_2, e_n\}$ $x=4\vec{e}_1-3\vec{e}_2+\vec{e}_3$. . $y=A(x)$	$y=20\vec{e}_1+18\vec{e}_2-6\vec{e}_3$	$y=12\vec{e}_1-5\vec{e}_2-3\vec{e}_3$	$y=22\vec{e}_1-13\vec{e}_2-3\vec{e}_3$	$y=2\vec{e}_1+9\vec{e}_2-5\vec{e}_3$
10.	A Kosmosdagi chiziqli operator R^3 matritsaga ega bo'lsin $A=\begin{pmatrix}4 & -2 & 1\\ 1 & -2 & 2\\ -3 & 2 & 2\end{pmatrix}$ asosda A $\{e_1, e_2, e_n\}$ $x=4\vec{e}_1-3\vec{e}_2+\vec{e}_3$. . $y=A(x)$	$y=7\vec{e}_1+3\vec{e}_2-9\vec{e}_3$	$y=2\vec{e}_1-15\vec{e}_2-3\vec{e}_3$	$y=2\vec{e}_1-3\vec{e}_2-3\vec{e}_3$	$y=2\vec{e}_1+5\vec{e}_2-4\vec{e}_3$

11.	A Asosda chiziqli operator $\{\vec{e}_1,\vec{e}_2\}$ Ma'ruzalar $A=\begin{pmatrix}3 & 4\\ 8 & 1\end{pmatrix}$ Bu operatorga qaysi matritsa asosda to'g'ri keladi $\{\vec{e}_2,\vec{e}_1\}$.	$A^*=\begin{pmatrix}1 & 8\\ 4 & 3\end{pmatrix}$	$A^*=\begin{pmatrix}1 & 8\\ 4 & 2\end{pmatrix}$	$A^*=\begin{pmatrix}1 & 2\\ 4 & 3\end{pmatrix}$	$A^*=\begin{pmatrix}1 & 8\\ 2 & 3\end{pmatrix}$
12.	A Asosda chiziqli operator $\{\vec{e}_1,\vec{e}_2\}$ matritsaga to'g'ri keladi $A=\begin{pmatrix}2 & 4\\ 9 & 7\end{pmatrix}$ Bu operatorga qaysi matritsa asosda to'g'ri keladi $\{\vec{e}_2,\vec{e}_1\}$.	$A^*=\begin{pmatrix}7 & 9\\ 4 & 2\end{pmatrix}$	$A^*=\begin{pmatrix}1 & 8\\ 4 & 2\end{pmatrix}$	$A^*=\begin{pmatrix}1 & 2\\ 4 & 3\end{pmatrix}$	$A^*=\begin{pmatrix}1 & 8\\ 2 & 3\end{pmatrix}$
13.	A Asosda chiziqli operator $\{\vec{e}_1,\vec{e}_2\}$ matritsaga to'g'ri keladi $A=\begin{pmatrix}7 & 3\\ 8 & 5\end{pmatrix}$ Bu operatorga qaysi matritsa asosda to'g'ri keladi $\{\vec{e}_2,\vec{e}_1\}$.	$A^*=\begin{pmatrix}5 & 8\\ 3 & 7\end{pmatrix}$	$A^*=\begin{pmatrix}1 & 8\\ 4 & 2\end{pmatrix}$	$A^*=\begin{pmatrix}1 & 2\\ 4 & 3\end{pmatrix}$	$A^*=\begin{pmatrix}1 & 8\\ 2 & 3\end{pmatrix}$

14.	Evklid 15. bo'shlig'idagi ikkita vektor, agar ularning skalyar mahsuloti bo'lsa, orthogonaldir:	0	1	90	180
16.	17. O'zgaruvchi x gradusning chiziqli bo'shlig'ida K2[x] polinomlari yuqori emas, ikkinchi element 2x 2 + 3x + 4 asosi 1, x, x^2 koordinatalariga ega:	4,3,2	4,2	1,2,3	0,0,1
18.	$\{\vec{e}_1, \vec{e}_2, \vec{e}_3\}$ Vektorlar asosda ko'rsatilgan $\vec{a}=(1;2;3)$, $\vec{b}=(2;3;7)$, $\vec{c}=(1;3;1)$, $\vec{d}=(2;3;4)$. Quyidagi tenglamalardan qaysi biri rost?	$\vec{d}=-9\vec{a}+4\vec{b}+3\vec{c}$	$\vec{d}=\vec{a}+4\vec{b}+3\vec{c}$	$\vec{d}=-9\vec{a}+\vec{b}+3\vec{c}$	$\vec{d}=-9\vec{a}+4\vec{b}+\vec{c}$

19.	В базисе $\{\vec{e}_1, \vec{e}_2, \vec{e}_3\}$ заданы векоры $\vec{a}=(1;2;3), \vec{b}=(2;-2;1)$, $\vec{c}=(1;-2;0), \vec{d}=(0;3;2)$. Quyidagi tenglamalardan qaysi biri rost?	$\vec{d}=0.5\vec{a}+0.5\vec{b}-1.5\vec{c}$	$\vec{d}=2\vec{a}+0.5\vec{b}-1.5\vec{c}$	$\vec{d}=0.5\vec{a}+5\vec{b}-15\vec{c}$	$\vec{d}=3.5\vec{a}+0.5\vec{b}-2.5\vec{c}$
20.	Vektorlar asosda berilgan $\{\vec{e}_1, \vec{e}_2, \vec{e}_3\}$ $\vec{a}_1=\{1;2,;3\}$, $\vec{a}_2=\{2;-2,;4\}$, $\vec{a}_3=\{-3;-1;-2\}$, $\vec{b}=\{-5;-1;4\}$. Quyidagi tenglamalardan qaysi biri rost?	$\vec{b}=2\overrightarrow{a_1}+\overrightarrow{a_2}+3\overrightarrow{a_3}$	$\vec{b}=3\overrightarrow{a_1}+\overrightarrow{a_2}+3\overrightarrow{a_3}$	$\vec{b}=2\overrightarrow{a_1}+2\overrightarrow{a_2}+3\overrightarrow{a_3}$	$\vec{b}=2\overrightarrow{a_1}+2\overrightarrow{a_2}+4\overrightarrow{a_3}$
21.	В базисе $\{\vec{e}_1, \vec{e}_2, \vec{e}_3\}$ заданы векоры $\vec{a}=(2;0;1), \vec{b}=(1;2;-1)$, $\vec{c}=(0;4;-1)$, $\vec{d}=(-1;-2;3)$.	$\vec{d}=\vec{a}-3\vec{b}+\vec{c}$	$\vec{d}=2\vec{a}-3\vec{b}+4\vec{c}$	$\vec{d}=3\vec{a}-3\vec{b}+\vec{c}$	$\vec{d}=\vec{a}-3\vec{b}+4\vec{c}$

	Quyidagi tenglamalardan qaysi biri rost?				
22.	O'z matritsa vektorlarini toping $A=\begin{pmatrix}2 & 0\\ 0 & 5\end{pmatrix}$ matritsaning xos vektorini toping.	$(1,0),\ (0,1)$	$(1,2),\ (0,1)$	$(1,0),\ (2,1)$	$(1,1),\ (2,1)$

13-14 mavzu

№	Savol	A	B	C	D
	Aa = (1/x, y) ifodasi C belgilangan A: R ® 2 R^2 mappingi:	Chiziqli bo‘lmagan	Chiziqli	Bir xil	Nol
2.	. Agar A operatori, Evklid bo'shlig'ida harakat qilsa, orthonormed asosni orthonormed asosga tarjima qilsa, u holda bu operator	orthogonal	Chiziqli bo‘lmagan	Nol	Oraliq bo‘lmagan
3.	Chiziqli bo'shliqdagi nol bo'lmagan vektor x chiziqli operatorning eigen vektori deyiladi A: L ® L agar biror haqiqiy son uchun aloqa ushlab tursa k	Ax=кx			
4.	Nol bo'lmagan vektorlarning har qanday orthogonal sistemasi	Chiziqli mAsosiyqil	Chiziqli bog'liq	standartizatsiyalangan	
5.	Agar asoslardagi chiziqli A operator matrislarga $\{\vec{e}_1, \vec{e}_2, ..., \vec{e}_n\}$	$A^* = C^{-1}AC$ munosabat o‘rinli bo‘ladi.	$A^* = CAC^{-1}$ munosabat o‘rinli bo‘ladi.	$A^* = CAC$ munosabat o‘rinli bo‘ladi.	$A^* = ACA^{-1}$ munosabat o‘rinli bo‘ladi.

	$\left\{\overrightarrow{e_1^*}, \overrightarrow{e_2^*}, ..., \overrightarrow{e_n^*}\right\}$ to'g'ri kelsa A A A^* , u holda:				
6.	A Kosmosdagi chiziqli operator R^3 matritsaga ega bo'lsin $A = \begin{pmatrix} 3 & 2 & 4 \\ -1 & 5 & 6 \\ 1 & 8 & 2 \end{pmatrix}$ asosda $\{e_1, e_2, e_n\}$ A $x = 4\vec{e}_1 - 3\vec{e}_2 + \vec{e}_3$. . $y = A(x)$	$y = 10\vec{e}_1 - 13\vec{e}_2 - 18\vec{e}_3$	$y = 11\vec{e}_1 - 13\vec{e}_2 - 14\vec{e}_3$	$y = 8\vec{e}_1 - 13\vec{e}_2 - 18\vec{e}_3$	$y = 10\vec{e}_1 - 15\vec{e}_2 - 18\vec{e}_3$
7.	A Kosmosdagi chiziqli operator R^3 matritsaga ega bo'lsin $A = \begin{pmatrix} 2 & -2 & 4 \\ 1 & 5 & 1 \\ 1 & 3 & 2 \end{pmatrix}$ asosda $\{e_1, e_2, e_n\}$ A $x = 4\vec{e}_1 - 3\vec{e}_2 + \vec{e}_3$. . $y = A(x)$	$y = 18\vec{e}_1 - 10\vec{e}_2 - 3\vec{e}_3$	$y = 18\vec{e}_1 - 15\vec{e}_2 - 3\vec{e}_3$	$y = 20\vec{e}_1 - 13\vec{e}_2 - 13\vec{e}_3$	$y = 12\vec{e}_1 - \vec{e}_2 - 3\vec{e}_3$
8.	A Kosmosdagi chiziqli operator R^3 matritsaga ega bo'lsin	$y = 4\vec{e}_1 + 5\vec{e}_2 + \vec{e}_3$	$y = \vec{e}_1 - 15\vec{e}_2 - 3\vec{e}_3$	$y = 2\vec{e}_1 - 3\vec{e}_2 - 13\vec{e}_3$	$y = 2\vec{e}_1 - 7\vec{e}_2 - 3\vec{e}_3$

	$A=\begin{pmatrix}1 & -2 & 4\\ 4 & 5 & 2\\ 1 & 3 & 2\end{pmatrix}$ asosda A$\{e_1,e_2,e_n\}$ $x=4\vec{e}_1-3\vec{e}_2+\vec{e}_3$. . $y=A(x)$				
9.	A Kosmosdagi chiziqli operator R^3 matritsaga ega bo'lsin $A=\begin{pmatrix}2 & -2 & 4\\ 4 & -2 & 2\\ -3 & 3 & 2\end{pmatrix}$ asosda A$\{e_1,e_2,e_n\}$ $x=4\vec{e}_1-3\vec{e}_2+\vec{e}_3$. . $y=A(x)$	$y=20\vec{e}_1+18\vec{e}_2-6\vec{e}_3$	$y=12\vec{e}_1-5\vec{e}_2-3\vec{e}_3$	$y=22\vec{e}_1-13\vec{e}_2-3\vec{e}_3$	$y=2\vec{e}_1+9\vec{e}_2-5\vec{e}_3$
10.	A Kosmosdagi chiziqli operator R^3 matritsaga ega bo'lsin $A=\begin{pmatrix}4 & -2 & 1\\ 1 & -2 & 2\\ -3 & 2 & 2\end{pmatrix}$ asosda A$\{e_1,e_2,e_n\}$ $x=4\vec{e}_1-3\vec{e}_2+\vec{e}_3$. . $y=A(x)$	$y=7\vec{e}_1+3\vec{e}_2-9\vec{e}_3$	$y=2\vec{e}_1-15\vec{e}_2-3\vec{e}_3$	$y=2\vec{e}_1-3\vec{e}_2-3\vec{e}_3$	$y=2\vec{e}_1+5\vec{e}_2-4\vec{e}_3$

11.	A Asosda chiziqli operator $\{\vec{e}_1, \vec{e}_2\}$ Ma'ruzalar $A=\begin{pmatrix}3 & 4\\ 8 & 1\end{pmatrix}$ Bu operatorga qaysi matritsa asosda to'g'ri keladi $\{\vec{e}_2, \vec{e}_1\}$.	$A^{*}=\begin{pmatrix}1 & 8\\ 4 & 3\end{pmatrix}$	$A^{*}=\begin{pmatrix}1 & 8\\ 4 & 2\end{pmatrix}$	$A^{*}=\begin{pmatrix}1 & 2\\ 4 & 3\end{pmatrix}$	$A^{*}=\begin{pmatrix}1 & 8\\ 2 & 3\end{pmatrix}$
12.	A Asosda chiziqli operator $\{\vec{e}_1, \vec{e}_2\}$ matritsaga to'g'ri keladi $A=\begin{pmatrix}2 & 4\\ 9 & 7\end{pmatrix}$ Bu operatorga qaysi matritsa asosda to'g'ri keladi $\{\vec{e}_2, \vec{e}_1\}$.	$A^{*}=\begin{pmatrix}7 & 9\\ 4 & 2\end{pmatrix}$	$A^{*}=\begin{pmatrix}1 & 8\\ 4 & 2\end{pmatrix}$	$A^{*}=\begin{pmatrix}1 & 2\\ 4 & 3\end{pmatrix}$	$A^{*}=\begin{pmatrix}1 & 8\\ 2 & 3\end{pmatrix}$
13.	A Asosda chiziqli operator $\{\vec{e}_1, \vec{e}_2\}$ matritsaga to'g'ri keladi $A=\begin{pmatrix}7 & 3\\ 8 & 5\end{pmatrix}$ Bu operatorga qaysi matritsa asosda to'g'ri keladi $\{\vec{e}_2, \vec{e}_1\}$.	$A^{*}=\begin{pmatrix}5 & 8\\ 3 & 7\end{pmatrix}$	$A^{*}=\begin{pmatrix}1 & 8\\ 4 & 2\end{pmatrix}$	$A^{*}=\begin{pmatrix}1 & 2\\ 4 & 3\end{pmatrix}$	$A^{*}=\begin{pmatrix}1 & 8\\ 2 & 3\end{pmatrix}$

14.	Evklid 15. bo'shlig'idagi ikkita vektor, agar ularning skalyar mahsuloti bo'lsa, orthogonaldir:	0	1	90	180
16.	17. O'zgaruvchi x gradusning chiziqli bo'shlig'ida K2[x] polinomlari yuqori emas, ikkinchi element 2x 2 + 3x + 4 asosi 1, x, x^2 koordinatalariga ega:	4,3,2	4,2	1,2,3	0,0,1
18.	$\{\vec{e}_1, \vec{e}_2, \vec{e}_3\}$ Vektorlar asosda ko'rsatilgan $\vec{a}=(1;2;3)$, $\vec{b}=(2;3;7)$, $\vec{c}=(1;3;1)$, $\vec{d}=(2;3;4)$. Quyidagi tenglamalardan qaysi biri rost?	$\vec{d}=-9\vec{a}+4\vec{b}+3\vec{c}$	$\vec{d}=\vec{a}+4\vec{b}+3\vec{c}$	$\vec{d}=-9\vec{a}+\vec{b}+3\vec{c}$	$\vec{d}=-9\vec{a}+4\vec{b}+\vec{c}$

19.	В баzисе $\left\{\vec{e}_1, \vec{e}_2, \vec{e}_3\right\}$ zаданы векоры $\vec{a}=(1;2;3), \vec{b}=(2;-2;1)$, $\vec{c}=(1;-2;0), \vec{d}=(0;3;2)$. Quyidagi tenglamalardan qaysi biri rost?	$\vec{d}=0.5\vec{a}+0.5\vec{b}-1.5\vec{c}$	$\vec{d}=2\vec{a}+0.5\vec{b}-1.5\vec{c}$	$\vec{d}=0.5\vec{a}+5\vec{b}-15\vec{c}$	$\vec{d}=3.5\vec{a}+0.5\vec{b}-2.5\vec{c}$
20.	Vektorlar asosda berilgan $\left\{\vec{e}_1, \vec{e}_2, \vec{e}_3\right\}$ $\vec{a}_1=\{1;2,;3\}$, $\vec{a}_2=\{2;-2,;4\}$, $\vec{a}_3=\{-3;-1;-2\}$, $\vec{b}=\{-5;-1;4\}$. Quyidagi tenglamalardan qaysi biri rost?	$\vec{b}=2\overrightarrow{a_1}+\overrightarrow{a_2}+3\overrightarrow{a_3}$	$\vec{b}=3\overrightarrow{a_1}+\overrightarrow{a_2}+3\overrightarrow{a_3}$	$\vec{b}=2\overrightarrow{a_1}+2\overrightarrow{a_2}+3\overrightarrow{a_3}$	$\vec{b}=2\overrightarrow{a_1}+2\overrightarrow{a_2}+4\overrightarrow{a_3}$
21.	В баzисе $\left\{\vec{e}_1, \vec{e}_2, \vec{e}_3\right\}$ zаданы векоры $\vec{a}=(2;0;1), \vec{b}=(1;2;-1)$, $\vec{c}=(0;4;-1)$, $\vec{d}=(-1;-2;3)$.	$\vec{d}=\vec{a}-3\vec{b}+\vec{c}$	$\vec{d}=2\vec{a}-3\vec{b}+4\vec{c}$	$\vec{d}=3\vec{a}-3\vec{b}+\vec{c}$	$\vec{d}=\vec{a}-3\vec{b}+4\vec{c}$

	Quyidagi tenglamalardan qaysi biri rost?				
22.	O'z matritsa vektorlarini toping $A=\begin{pmatrix} 2 & 0 \\ 0 & 5 \end{pmatrix}$ matritsaning xos vektorini toping.	$(1,0),\ (0,1)$	$(1,2),\ (0,1)$	$(1,0),\ (2,1)$	$(1,1),\ (2,1)$

№	savol	A	B	C	D
	$f(\mathrm{X})$ O'zgaruvchilarning Kvadratik shakli $x_1, x_2, ..., x_n$ –	$f(\mathrm{X}) = \sum_{i=1}^{n}\sum_{j=1}^{n} a_{ij}x_i x_j$	$f(\mathrm{X}) = \sum_{i=1}^{5}\sum_{j=1}^{5} a_{ij}x_i x_j$	$f(\mathrm{X}) = \sum_{i=1}^{n}\sum_{j=1}^{n} a_{ij}x_i^2 x_j$	$f(\mathrm{X}) = \sum_{i=1}^{n}\sum_{j=1}^{n} a_{ij}x_i x_j^2$
2.	Matritsa shaklida ikkita o'zgaruvchining Kvadratik shakli hisoblanadi	$f = X^T AX = \begin{pmatrix} x_1 & x_2 \end{pmatrix}\begin{pmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{pmatrix}\begin{pmatrix} x_1 \\ x_2 \end{pmatrix}$	$f = XAX = \begin{pmatrix} x_1 \\ x_2 \end{pmatrix}\begin{pmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{pmatrix}\begin{pmatrix} x_1 \\ x_2 \end{pmatrix}$	$f = XAX^T = \begin{pmatrix} x_1 \\ x_2 \end{pmatrix}\begin{pmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{pmatrix}\begin{pmatrix} x_1 & x_2 \end{pmatrix}$	$f = AX = \begin{pmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{pmatrix}\begin{pmatrix} x_1 \\ x_2 \end{pmatrix}$
3.	Uch o'zgaruvchining chiziqli shaklining matritsali ko'rinishi				
4.	$f = 2x_1^2 + 4x_1x_2 - 3x_2^2$ Shakllanishdan so'ng Kvadratik shakl qanday o'zgaradi $\begin{cases} x_1 = 2y_1 - 3y_2, \\ x_2 = y_1 + y_2 \end{cases}$	$L = 13y_1^2 - 34y_1y_2 + 3y_1^2$	$L = y_1^2 - 34y_1y_2 + 13y_1^2.$	$L = 3y_1^2 - 4y_1y_2 + 3y_1^2.$	$L = 13y_1^2 - 3y_1y_2 + 13y_1^2.$
5.	Kvadratik shaklning kanonik ko'rinishini toping $f = 2x_1x_2 - 6x_2x_3 + 2x_3x_1$	$f = \frac{1}{2}t_1^2 - \frac{1}{2}t_2^2 + 6t_3^2$	$f = t_1^2 - \frac{1}{2}t_2^2 + t_3^2$	$f = \frac{1}{2}t_1^2 - \frac{1}{2}t_2^2 + t_3^2$	$f = t_1^2 - t_2^2 + 6t_3^2$
6.	Kvadratik shaklning kanonik ko'rinishini toping	$f = y_1^2 + y_2^2 + y_3^2 - 3y_4^2$	$f = y_1^2 + y_2^2 + 8y_3^2 - 3y_4^2$	$f = y_1^2 + 4y_2^2 + y_3^2 - 3y_4^2$	$f = 3y_1^2 + y_2^2 + y_3^2 - 3y_4^2$

	$f=2x_1x_2+2x_1x_3-2x_1x_4-$ $-2x_2x_3+2x_2x_4+2x_3x_4$.				
7.	Ikki o'zgaruvchining Kvadratik shaklining umumiy ko'rinishini toping	[illegible]			
8.	Kvadratik shaklning kanonik ko'rinishini toping $F(x_1,x_2)=2x_1x_2$	$F(y_1,y_2)=2y_1^2-2y_2^2$	$F(y_1,y_2)=4y_1^2-2y_2^2$	$F(y_1,y_2)=2y_1^2-4y_2^2$	$F(y_1,y_2)=4y_1^2+4y_2^2$
9.	Kvadratik shaklning kanonik ko'rinishini toping $F(x_1,x_2)=$ $=2x_1^2+x_2^2-4x_1x_2$	$F(y_1,y_2)=2y_1^2-y_2^2$	$F(y_1,y_2)=2y_1^2-2y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=4y_1^2-2y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=2y_1^2-4y_2^2$
10.	Kvadratik shaklning kanonik ko'rinishini toping $F(x_1,x_2)=$ $=3x_1^2-x_2^2-6x_1x_2$	$F(\mathrm{y}_1,\mathrm{y}_2)=3y_1^2-4y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=2y_1^2-y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=2y_1^2-2y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=4y_1^2-2y_2^2$
11.	Kvadratik shaklning kanonik ko'rinishini toping $F(x_1,x_2)=x_1^2+2x_1x_2$	$F(\mathrm{y}_1,\mathrm{y}_2)=y_1^2-y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=2y_1^2+y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=y_1^2+2y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=y_1^2+y_2^2$

12.	Kvadratik shaklning kanonik ko'rinishini toping $F(x_1,x_2)=$ $=2x_1^2+x_2^2+4x_1x_2$	$F(\mathrm{y}_1,\mathrm{y}_2)=-2y_1^2+y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=2y_1^2-y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=2y_1^2-2y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=4y_1^2-2y_2^2$
13.	Kvadratik shaklning kanonik ko'rinishini toping $F(x_1,x_2)=$ $=2x_1^2+x_2^2+8x_1x_2$	$F(\mathrm{y}_1,\mathrm{y}_2)=2y_1^2-7y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=3y_1^2-4y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=2y_1^2-y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=2y_1^2-2y_2^2$
14.	Kvadratik shaklning kanonik ko'rinishini toping $F(x_1,x_2)=$ $=x_1^2+4x_2^2+12x_1x_2$	$F(\mathrm{y}_1,\mathrm{y}_2)=y_1^2-8y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=2y_1^2-7y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=3y_1^2-4y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=2y_1^2-y_2^2$
15.	Kvadratik shaklning kanonik ko'rinishini toping $F(x_1,x_2)=$ $=x_1^2+9x_2^2+12x_1x_2$	$F(\mathrm{y}_1,\mathrm{y}_2)=y_1^2-3y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=y_1^2-8y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=y_1^2-7y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=y_1^2-4y_2^2$
16.	Kvadratik shaklning kanonik ko'rinishini toping $F(x_1,x_2)=$ $=x_1^2+x_2^2+12x_1x_2$	$F(\mathrm{y}_1,\mathrm{y}_2)=y_1^2-35y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=3y_1^2-4y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=2y_1^2-y_2^2$	$F(\mathrm{y}_1,\mathrm{y}_2)=2y_1^2-2y_2^2$

17.	Kvadratik shaklning kanonik ko'rinishini toping $F(x_1, x_2) =$ $= x_1^2 + 4x_2^2 + 6x_1x_2$	$F(y_1, y_2) = y_1^2 - 5y_2^2$	$F(y_1, y_2) = y_1^2 - 35y_2^2$	$F(y_1, y_2) = 3y_1^2 - 4y_2^2$	$F(y_1, y_2) = 2y_1^2 - y_2^2$
18.	Kvadratik shaklning kanonik ko'rinishini toping: $F(x_1, x_2) =$ $= x_1^2 + 8x_2^2 + 4x_1x_2$	$F(y_1, y_2) = y_1^2 + 4y_2^2$	$F(y_1, y_2) = y_1^2 - 5y_2^2$	$F(y_1, y_2) = 3y_1^2 - 4y_2^2$	$F(y_1, y_2) = 2y_1^2 - 5y_2^2$
19.	Kvadratik shaklning kanonik ko'rinishini $y' + xy = xy^3$ toping $F(x_1, x_2) =$ $= x_1^2 + 18x_2^2 + 8x_1x_2$	$F(y_1, y_2) = y_1^2 + 2y_2^2$	$F(y_1, y_2) = y_1^2 + 4y_2^2$	$F(y_1, y_2) = y_1^2 - 5y_2^2$	$F(y_1, y_2) = 3y_1^2 - 4y_2^2$
20.	Kvadratik shaklning kanonik ko'rinishini toping $F(x_1, x_2) =$ $= x_1^2 + 24x_2^2 + 12x_1x_2$	$F(y_1, y_2) = y_1^2 - 12y_2^2$	$F(y_1, y_2) = y_1^2 + 4y_2^2$	$F(y_1, y_2) = y_1^2 - 5y_2^2$	$F(y_1, y_2) = 3y_1^2 - 4y_2^2$