$$\left(\begin{array}{cc|c}
64 & 31 & -68 \\
4 & -34 & -50
\end{array}\right) \qquad \left(\begin{array}{cc|c}
2 & -6 & 0 & 2 \\
6 & -8 & -4 & -8 \\
6 & 4 & -9 & 9
\end{array}\right)$$

$$\left(\begin{array}{cc|c}
-2 & -4 & 6 \\
4 & 2 & 1
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-5 & -7 \\
-5 & 4 \\
-7 & 1 \\
-5 & -4
\end{array}\right)$$

$$\begin{pmatrix}
-5 & 4 \\
3 & -4 \\
4 & -2 \\
5 & -7
\end{pmatrix}$$

$$\begin{vmatrix}
972 & -966 \\
759 & 363
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
31 & -48 & 27 & | & -97 \\
-39 & -33 & -71 & | & 48
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
4 & 3 & -7 & | & -9 \\
-2 & 5 & -5 & | & 0 \\
-3 & 7 & 8 & | & -2
\end{array}\right)$$

$$\left(\begin{array}{ccc|c}
0 & 0 & -1 \\
-4 & -5 & 4
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
9 & -4 & -7 & -5 & -5 \\
-3 & -4 & -7 & -3 & -4 \\
1 & -6 & -8 & -6 & 1
\end{array}\right)$$

$$\begin{vmatrix}
-5 & 3 & 8 & 7 \\
1 & -6 & -2 & 9 \\
-8 & -3 & 9 & -1 \\
-6 & -3 & 8 & -3
\end{vmatrix}$$

$$\begin{pmatrix}
6 & 6 \\
0 & 0 \\
-5 & -9
\end{pmatrix}$$

$$\begin{vmatrix}
-6 & 3 & -8 & 5 \\
-7 & 4 & 4 & 5 \\
-1 & 7 & 9 & -7 \\
0 & 9 & 5 & -1
\end{vmatrix}$$

$$\begin{pmatrix}
3 & -9 & 9 \\
-5 & -4 & -1
\end{pmatrix}$$

$$\begin{vmatrix}
-88 & 55 & 53 \\
-91 & 36 & 1 \\
27 & 90 & 97
\end{vmatrix}$$

$$\begin{pmatrix}
6 & -3 & | -2 \\
6 & -6 & | 8
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-7 & -16 \\
-57 & -22
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-31 & -17 & 94 & -79 \\
-11 & -55 & -30 & 99 \\
-34 & 21 & -16 & 46
\end{array}\right)$$

$$\left(\begin{array}{ccc|c}
-48 & -20 & 28 & 97 & -8 \\
98 & 98 & -51 & -85 & -68
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-77 & -53 \\
51 & -70 \\
48 & 32
\end{array}\right)$$

$$\begin{pmatrix}
44 & -80 & 2 \\
68 & 5 & 88 \\
76 & -26 & -99 \\
51 & -74 & -98 \\
46 & 68 & 67
\end{pmatrix}$$

$$\begin{pmatrix}
7 & 8 & -6 & 3 \\
2 & 0 & 9 & 1 \\
-1 & 8 & 3 & -4
\end{pmatrix}$$

$$\begin{pmatrix}
-3 & 9 & -1 & -4 & -8 & 0 \\
-7 & -4 & 2 & 5 & 5 & -8 \\
-8 & -5 & 1 & 6 & 6 & 8 \\
2 & 3 & -4 & -4 & -6 & 1 \\
2 & 1 & -2 & -1 & -5 & 6
\end{pmatrix}
\begin{pmatrix}
9 & 1 & 5 & 5 & 8 & -4 \\
-3 & 4 & 2 & 5 & -3 & 9 \\
-9 & 4 & -2 & -9 & 3 & -9
\end{pmatrix}$$

$$\begin{pmatrix} 7 & -9 & 2 & -5 \\ 4 & -1 & 1 & 1 \\ 1 & 6 & 9 & -3 \\ 6 & 7 & -2 & -7 \\ 0 & 5 & 0 & -6 \end{pmatrix} \begin{pmatrix} 30 & 262 & -261 & 56 & -784 & 366 \\ 201 & -436 & -243 & 472 & -112 & 919 \\ 942 & 676 & -818 & -849 & -423 & -278 \\ 410 & 653 & 125 & 278 & 146 & -931 \\ 53 & -573 & -166 & -982 & 311 & 820 \end{pmatrix}$$

$$\left(\begin{array}{cc|c} -25 & 21 & -66 \\ -31 & -46 & -34 \end{array}\right) \qquad \left(\begin{array}{cc|c} 29 & -49 & -29 \\ -64 & 63 & -41 \end{array}\right)$$

$$\begin{pmatrix}
3 & -7 & -3 & 7 \\
-1 & -9 & 8 & -7 \\
3 & 2 & -1 & 9
\end{pmatrix}
\begin{pmatrix}
38 & 11 & -23 & 46 & 15 & 56 \\
32 & 68 & -12 & -69 & -70 & 44 \\
-66 & 31 & 24 & -88 & 57 & -93 \\
73 & 68 & -57 & 45 & 46 & -75
\end{pmatrix}$$

$$\left(\begin{array}{cc|c}
353 & 784 & -826 \\
-156 & -940 & -562
\end{array}\right) \qquad \left(\begin{array}{cc|c}
6 & -1 & 0 \\
-9 & -1 & -2 \\
7 & 1 & 5
\end{array}\right)$$

$$\begin{pmatrix}
-9 & -7 & | & -9 \\
-7 & 0 & | & 9
\end{pmatrix} \qquad \qquad \begin{pmatrix}
-97 & -43 \\
-76 & -38
\end{pmatrix}$$

$$\begin{vmatrix} -54 & 3 & 17 & 89 \\ -93 & -86 & -36 & 65 \\ 68 & -73 & 83 & 6 \\ 93 & 86 & -81 & 94 \end{vmatrix} \quad \begin{pmatrix} -21 & -91 & -16 & | & -95 \\ -79 & -47 & 93 & | & -4 \\ 9 & 83 & 79 & | & 13 \end{pmatrix}$$

$$\begin{pmatrix}
-61 & 52 & -67 & 93 \\
74 & -78 & 30 & -56 \\
2 & 70 & -69 & -56
\end{pmatrix}
\begin{pmatrix}
-90 & -91 & 47 \\
-69 & 47 & 26 \\
1 & 71 & 20 \\
15 & -20 & -50
\end{pmatrix}$$

$$\begin{pmatrix}
94 & -83 & | & -36 \\
35 & -83 & | & -69
\end{pmatrix}$$

$$\begin{pmatrix}
1 & 8 \\
-2 & 9 \\
4 & 1 \\
2 & 2
\end{pmatrix}$$

$$\begin{vmatrix} 883 & -186 & 838 \\ -681 & 989 & -174 \\ -633 & -308 & 261 \end{vmatrix} = \begin{pmatrix} 0 & 4 & 4 & 7 & | & -9 \\ -6 & 9 & 5 & -5 & | & 5 \\ -6 & -3 & -1 & -5 & | & -7 \\ 0 & 3 & -3 & 3 & | & 9 \end{pmatrix}$$

$$\begin{vmatrix}
91 & -24 & -11 \\
15 & -23 & 82 \\
75 & 45 & -88
\end{vmatrix}$$

$$\begin{pmatrix}
5 & -4 & -3 & 4 \\
9 & 3 & 1 & -2 \\
-2 & 4 & -1 & 1 \\
2 & 3 & -9 & -5
\end{pmatrix}$$

$$\begin{bmatrix}
 5 & 9 & -2 \\
 -5 & -2 & -8 \\
 3 & 9 & -6
 \end{bmatrix}$$

$$\begin{pmatrix}
 -4 & 9 & 3 & 7 & -9 \\
 4 & 0 & 2 & -2 & 9 \\
 3 & 4 & 3 & 1 & 6
 \end{pmatrix}$$

$$\left(\begin{array}{ccc|ccc|c} -10 & -29 & -42 & 75 & 93 & 60 \\ -16 & 74 & -79 & -2 & -6 & -85 \end{array}\right) \left(\begin{array}{ccc|c} 4 & 3 & -9 & 6 \\ -2 & 6 & 1 & 5 \end{array}\right)$$

$$\begin{pmatrix}
-3 & 8 & 6 \\
7 & 3 & -6 \\
-2 & -5 & 6 \\
-9 & 6 & -6
\end{pmatrix}
\qquad
\begin{pmatrix}
4 & 0 & -3 & | & -2 \\
-3 & -6 & 3 & | & 7
\end{pmatrix}$$

$$\begin{vmatrix}
 -7 & 79 \\
 -29 & 2
 \end{vmatrix}
 = 
 \begin{pmatrix}
 50 & -84 & -59 & | & -85 \\
 26 & 68 & 22 & | & -55
 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
9 & 4 & 6 & 6 & -6 & 6 \\
3 & -7 & 7 & -1 & 4 & -8
\end{array}\right) \left(\begin{array}{ccc|c}
10 & -32 & 28 & 80 \\
-85 & 12 & -47 & 31 \\
25 & -90 & -77 & 6
\end{array}\right)$$

$$\begin{pmatrix}
72 & 12 \\
49 & 85 \\
-1 & -6
\end{pmatrix}
\qquad
\begin{pmatrix}
-1 & 2 & 8 & -6 & -9 \\
-6 & -9 & -1 & -7 & -8 \\
-4 & -2 & 7 & -9 & 3
\end{pmatrix}$$

$$\begin{vmatrix} -7 & 2 & -1 & -4 \\ 7 & -3 & 9 & -3 \\ 1 & 5 & 5 & -9 \\ 4 & -7 & -3 & -8 \end{vmatrix} \begin{pmatrix} 829 & 576 & 729 & -171 & 657 \\ 134 & 661 & -357 & 96 & -119 \end{pmatrix}$$

$$\begin{vmatrix} 99 & -69 \\ 35 & 20 \end{vmatrix} \qquad \begin{vmatrix} 9 & -4 & -6 & -8 \\ -6 & -9 & 4 & -3 \\ 6 & 5 & -3 & -6 \\ -3 & -9 & 3 & -6 \\ -7 & 7 & -1 & 8 \end{vmatrix}$$

$$\begin{pmatrix} -2 & 5 & 4 \\ 2 & 9 & 4 \end{pmatrix} \qquad \begin{pmatrix} 0 & 0 & -6 \\ -7 & -5 & 5 \\ -9 & -3 & -1 \end{pmatrix}$$

$$\begin{vmatrix} -4 & 7 \\ 8 & -3 \end{vmatrix} \begin{pmatrix} 34 & -5 & 34 & 76 & 38 \\ 79 & -36 & -83 & -50 & -1 \\ -30 & 32 & -46 & -94 & 95 \\ -7 & 35 & -73 & 75 & -39 \end{vmatrix} \begin{vmatrix} -77 & -5 & 12 & 22 \\ -71 & 26 & 0 & 70 \\ -94 & 91 & -65 & 62 \\ 1 & 67 & -63 & -36 \end{vmatrix}$$

$$\begin{vmatrix} -485 & -145 & -931 & -705 \\ 303 & 544 & -622 & 393 \\ -242 & 92 & 668 & -529 \\ -650 & -151 & 955 & -187 \end{vmatrix} \begin{pmatrix} -69 & -30 & -60 \\ 94 & -2 & -38 \end{pmatrix}$$

$$\begin{pmatrix} 1 & -2 \\ 1 & 6 \\ 9 & 8 \\ 8 & -8 \\ -5 & 8 \end{pmatrix} \qquad \begin{pmatrix} -68 & -10 & 52 & 21 \\ 81 & -42 & -28 & -39 \\ -73 & -85 & 3 & -40 \end{pmatrix}$$

$$\begin{pmatrix}
58 & 36 & -68 & 82 \\
-13 & 16 & -80 & -38 \\
68 & -75 & -83 & -35 \\
-30 & -2 & -3 & -63 \\
-99 & -28 & -39 & 8
\end{pmatrix}$$

$$\begin{pmatrix}
3 & -6 & -4 & | 6 \\
-8 & -7 & -4 & | 6
\end{pmatrix}$$

$$\left| \begin{array}{cc|c}
9 & -3 \\
-6 & 0
\end{array} \right| 
\left( \begin{array}{cc|c}
-1 & 3 \\
8 & 2 \\
3 & 1 \\
7 & -5 \\
3 & 2
\end{array} \right)$$

$$\begin{vmatrix}
-975 & -860 \\
4 & 263
\end{vmatrix}
\qquad \qquad \begin{pmatrix}
-33 & 9 \\
-34 & 42 \\
-75 & -27
\end{pmatrix}$$

$$\begin{pmatrix} 39 & 70 & 37 & -73 & 98 \\ -75 & -72 & -65 & -18 & 34 \\ -72 & -67 & -7 & 72 & -87 \end{pmatrix} \begin{pmatrix} -7 & -2 & 8 & -4 \\ 3 & -8 & 7 & -1 \end{pmatrix}$$

$$\begin{pmatrix} -290 & -97 & 776 \\ 636 & -470 & -454 \\ -851 & 463 & -917 \end{pmatrix} \begin{pmatrix} 69 & 48 & -7 & 65 & -51 \\ 21 & -26 & -2 & 92 & -56 \end{pmatrix}$$

$$\begin{pmatrix}
9 & 3 & 6 & 1 & | & -1 \\
6 & 9 & 1 & 2 & | & -8 \\
7 & 3 & 3 & -6 & | & 2 \\
2 & -7 & -2 & 5 & | & 5
\end{pmatrix}$$

$$\begin{vmatrix}
-77 & -29 & -65 \\
-75 & -67 & -93 \\
11 & -76 & 24
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
0 & 90 & -14 & 66 \\
92 & -95 & -97 & -13
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
8 & -7 & 0 \\
-7 & -9 & -8 \\
-4 & -6 & 1
\end{array}\right|$$

$$\left(\begin{array}{cc|c}
5 & 4 & -9 \\
-2 & -4 & -5
\end{array}\right) \qquad \left(\begin{array}{cc|c}
1 & 1 & -9 & 7 \\
6 & -3 & -8 & -1 \\
3 & 6 & -5 & -4 \\
-5 & -2 & -6 & 7
\end{array}\right)$$

$$\left(\begin{array}{cc|c}
4 & 3 & -8 \\
0 & -6 & -9
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-50 & -23 & 37 \\
8 & 87 & -2
\end{array}\right)$$

$$\begin{pmatrix} -13 & 60 & 7 & -84 \\ -9 & -90 & 86 & 89 \\ -33 & -38 & 53 & -59 \\ -64 & -62 & -30 & 25 \end{pmatrix} \begin{pmatrix} 33 & -57 & -55 & -42 & 38 & | & -57 \\ 94 & -85 & -61 & -82 & 54 & | & -27 \\ -6 & -35 & 27 & -19 & -58 & | & -14 \end{pmatrix}$$

$$\begin{pmatrix} -2 & 2 & 1 \\ -9 & 1 & 2 \\ 0 & 7 & 4 \\ -2 & -5 & -7 \end{pmatrix} \qquad \begin{vmatrix} -57 & -84 & 20 & -75 \\ -23 & 78 & 74 & -76 \\ -83 & -55 & 65 & -95 \\ -55 & -78 & -74 & 5 \end{vmatrix}$$

$$\begin{vmatrix}
-3 & 4 \\
6 & -9
\end{vmatrix}$$

$$\begin{vmatrix}
-37 & 53 & -33 & -67 \\
-30 & 50 & -70 & 32 \\
-30 & -66 & -14 & -23 \\
-8 & 76 & 84 & -54
\end{vmatrix}$$

$$\begin{vmatrix}
6 & -8 & 6 & 6 \\
-6 & 9 & -3 & -1 \\
3 & 4 & 5 & -4 \\
0 & 7 & 4 & 0
\end{vmatrix}$$

$$\begin{pmatrix}
-4 & -7 & 9 \\
5 & -5 & 2 \\
4 & 8 & -4
\end{pmatrix}$$

$$\begin{pmatrix}
-6 & -8 \\
-5 & -6
\end{pmatrix} \qquad \qquad \begin{pmatrix}
91 & 12 & 4 \\
58 & -10 & -45
\end{pmatrix}$$

$$\begin{vmatrix}
-4 & -45 \\
8 & -85
\end{vmatrix} \qquad \begin{vmatrix}
-20 & 23 & -66 \\
-61 & -16 & -54 \\
34 & -17 & -23
\end{vmatrix}$$

$$\begin{pmatrix}
5 & -6 & -5 & -1 & | & -2 \\
9 & 4 & -1 & -3 & | & -5 \\
2 & 8 & -6 & -1 & | & -3 \\
2 & -5 & -8 & 3 & | & -4
\end{pmatrix}$$

$$\begin{pmatrix}
-5 & 7 & 7 \\
-4 & 2 & 0
\end{pmatrix}$$

$$\begin{pmatrix}
-693 & 961 & 349 \\
-411 & -872 & 674
\end{pmatrix}$$

$$\begin{vmatrix}
51 & 71 \\
98 & 36
\end{vmatrix}$$

$$\left| \begin{array}{cccc}
3 & 5 \\
0 & 0
\end{array} \right| 
\left( \begin{array}{cccc}
-76 & 5 & 13 \\
-30 & 62 & -93
\end{array} \right)$$

$$\begin{pmatrix}
88 & -81 & 58 & -55 & | & -50 \\
-36 & 48 & 88 & 41 & | & -36 \\
-74 & -42 & -56 & 0 & | & 2
\end{pmatrix}
\begin{pmatrix}
0 & 8 & -4 \\
7 & -1 & 3 \\
9 & 6 & 2 \\
6 & -9 & -1 \\
7 & 5 & -1
\end{pmatrix}$$

$$\begin{pmatrix} -74 & -42 & -56 & 0 & 2 & 6 & -9 & -1 \\ 7 & 5 & -1 & 6 & 4 & 2 & -7 \\ -1 & 9 & 1 & -2 & 2 & -7 \\ -3 & 5 & -1 & -2 & 9 & 0 \\ 1 & 8 & 2 & 0 & 4 & 8 \end{pmatrix} \begin{pmatrix} -923 & 72 & -335 & 704 \\ -325 & -332 & -509 & -996 \\ -325 & -332 & -509 & -996 \end{pmatrix}$$

$$\begin{vmatrix}
-2 & 5 & -9 & -6 \\
9 & 6 & -9 & 0 \\
-1 & -5 & -8 & -3 \\
-7 & -6 & 7 & -3
\end{vmatrix}$$

$$\begin{vmatrix}
47 & -30 \\
21 & 23
\end{vmatrix}$$

$$\begin{pmatrix} -1 & -7 & -7 & 2 & | & -8 \\ 3 & 1 & -3 & 5 & | & -2 \\ -2 & 6 & 0 & 0 & | & -9 \end{pmatrix} \qquad \begin{pmatrix} 8 & -2 \\ -4 & 3 \end{pmatrix}$$

$$\begin{vmatrix} -94 & -69 \\ 27 & -49 \end{vmatrix} = \begin{pmatrix} 9 & 2 & -3 & 6 & -7 & 1 \\ -7 & 5 & 1 & 5 & -7 & 4 \\ 6 & -7 & -8 & -8 & -5 & 4 \\ -8 & 8 & -1 & -5 & -6 & -8 \\ 0 & -8 & 2 & -3 & -7 & 0 \end{pmatrix}$$

$$\begin{pmatrix} -95 & -52 & -32 & 95 & 32 & 6 \\ 34 & -79 & 36 & 31 & -58 & -28 \\ -17 & 91 & -26 & -94 & 63 & 72 \\ -32 & 45 & 95 & -21 & 33 & 9 \end{pmatrix} \begin{pmatrix} 8 & -3 \\ 2 & -8 \end{pmatrix}$$

$$\begin{pmatrix} 69 & 91 & 67 & -95 & 96 & -48 \\ 60 & -65 & 15 & -20 & 38 & 53 \\ 69 & 66 & 74 & 24 & 6 & 56 \end{pmatrix} \begin{pmatrix} 9 & 24 & 42 & 90 & 49 \\ 33 & -47 & -43 & -98 & 1 \\ -43 & -70 & -98 & 53 & -3 \end{pmatrix}$$

$$\begin{pmatrix} 67 & -94 & 52 & -78 & -22 & | & -2 \\ -50 & 9 & -9 & -93 & -42 & | & 3 \\ 58 & 45 & -45 & 81 & 49 & | & 38 \\ -47 & 74 & 84 & -24 & 42 & | & 83 \end{pmatrix} \begin{pmatrix} -7 & -4 & 2 & | & -7 \\ 3 & -3 & 6 & | & -4 \\ 6 & 8 & -4 & | & -5 \end{pmatrix}$$

$$\begin{pmatrix}
-7 & 3 & -9 & 9 & 4 & | & -9 \\
-6 & 9 & 5 & 2 & -2 & | & 6 \\
5 & -8 & 5 & -5 & 5 & | & -9
\end{pmatrix}$$

$$\begin{pmatrix}
64 & 80 \\
3 & 92
\end{pmatrix}$$

$$\left(\begin{array}{cccccc}
-50 & -70 & -11 & -32 \\
43 & 88 & 92 & 40
\end{array}\right)
\left(\begin{array}{ccccccccc}
3 & 5 & 1 & 0 & 7 \\
5 & -3 & 8 & -7 & 6 \\
7 & -4 & -5 & -4 & 0 \\
-3 & -9 & -6 & 7 & 1
\end{array}\right)$$

$$\begin{vmatrix}
-893 & 445 & -969 \\
-621 & 413 & 677 \\
-224 & 967 & 786
\end{vmatrix}
\qquad
\begin{pmatrix}
-996 & -462 & | 122 \\
370 & 799 & | -178
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
6 & -5 & -8 & -6 \\
1 & 7 & 1 & -9
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
-5 & 4 \\
0 & 1
\end{array}\right|$$

$$\begin{pmatrix}
-82 & -18 & 17 & -7 & | & -73 \\
-16 & -6 & 85 & 78 & | & -48 \\
48 & -48 & -20 & -83 & | & -30 \\
25 & 42 & 19 & 54 & | & -12
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
8 & -3 & -9 \\
9 & -2 & 6
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
25 & 47 & 60 & 69 \\
-37 & 68 & 43 & -7
\end{array}\right)$$

$$\left(\begin{array}{cc|c}
9 & -4 & -7 \\
0 & -8 & -5
\end{array}\right) \qquad \left(\begin{array}{cc|c}
16 & -20 & -87 & 61 \\
-62 & -72 & -23 & -68
\end{array}\right)$$

$$\begin{vmatrix}
 0 & -6 \\
 -8 & 5
 \end{vmatrix}
 \begin{vmatrix}
 -6 & 9 & 8 \\
 1 & -1 & 1 \\
 -1 & 6 & 4
 \end{vmatrix}$$

$$\begin{pmatrix}
-9 & -1 & 5 \\
-1 & 3 & 2 \\
-9 & 5 & -1 \\
6 & -8 & -2
\end{pmatrix}
\begin{pmatrix}
-2 & 1 & 6 & 2 & -4 & | & -6 \\
9 & -8 & -9 & 1 & -6 & | & -5 \\
3 & 5 & 0 & 9 & 2 & | & -3 \\
4 & -6 & 0 & 3 & -7 & | & -1 \\
7 & 2 & 8 & -4 & 3 & | & -1
\end{pmatrix}$$

$$\left(\begin{array}{cc|cc|c} -7 & 8 & -7 & 1 \\ -2 & 8 & -8 & -7 \end{array}\right) \qquad \left(\begin{array}{cc|cc|c} 63 & -81 & -55 & -78 \\ -78 & 38 & 74 & -22 \end{array}\right)$$

$$\left(\begin{array}{ccc|c}
5 & -3 & 3 \\
3 & -8 & -7
\end{array}\right) \quad \left(\begin{array}{cccc|c}
-9 & 4 & -2 & -9 & 3 & -5 \\
-2 & -4 & 3 & -3 & -9 & 1 \\
-5 & 0 & 3 & -8 & 3 & -3 \\
0 & 5 & -6 & -5 & 1 & 6
\end{array}\right)$$

$$\begin{pmatrix}
5 & 8 & 64 & 48 \\
-6 & -44 & -76 & -90 \\
-90 & -16 & 2 & -9
\end{pmatrix}
\begin{pmatrix}
0 & 5 & 4 & 7 & 0 & -9 \\
4 & 0 & 2 & -8 & 0 & 6 \\
7 & 6 & 5 & 0 & 9 & 8 \\
8 & -2 & -6 & -3 & 4 & 1
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
2 & 9 & -4 \\
-1 & -6 & -1
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-43 & -29 & -27 & -72 \\
-64 & -88 & -86 & -70 \\
92 & 46 & 57 & -85
\end{array}\right)$$

$$\begin{pmatrix} -75 & -17 & -99 \\ 72 & -62 & 69 \\ -37 & -78 & -10 \end{pmatrix} \qquad \begin{pmatrix} -6 & 7 \\ 3 & -4 \end{pmatrix}$$

$$\begin{pmatrix} 5 & 8 \\ -4 & 6 \end{pmatrix} \qquad \begin{pmatrix} 444 & 625 & 38 & 853 \\ 226 & -12 & 810 & -885 \\ 416 & -815 & -395 & 575 \\ -890 & 42 & -428 & -844 \\ 797 & -993 & 0 & 911 \end{pmatrix}$$

$$\left| \begin{array}{cccc}
-6 & 7 \\
0 & 5
\end{array} \right| 
\left( \begin{array}{ccccc}
-3 & 5 & -4 & 1 \\
6 & 2 & -7 & 4
\end{array} \right)$$

$$\begin{vmatrix}
 -5 & -4 \\
 -7 & 6
 \end{vmatrix}
 \qquad \begin{vmatrix}
 2 & 8 \\
 8 & -6
 \end{vmatrix}$$

$$\begin{pmatrix} -8 & -11 & 90 & 14 & 40 \\ -90 & 78 & 15 & -81 & -15 \\ 91 & -73 & -55 & -11 & -30 \\ -75 & 57 & 41 & 25 & 95 \end{pmatrix} \begin{pmatrix} -3 & 7 & -2 \\ 4 & -3 & -9 \\ 5 & 9 & -1 \\ 2 & -5 & -6 \end{pmatrix}$$

$$\begin{vmatrix} -55 & -51 & 79 \\ -31 & 31 & -25 \\ 13 & 36 & 40 \end{vmatrix} \begin{vmatrix} 981 & 190 & -851 & 25 & -30 & 549 \\ -451 & 486 & -637 & 708 & 93 & -394 \\ -19 & 116 & -117 & 518 & 207 & -68 \\ 201 & -56 & 862 & -781 & 138 & -921 \end{vmatrix}$$

$$\begin{pmatrix}
3 & 2 & 1 & -8 \\
9 & -4 & 9 & -4
\end{pmatrix}$$

$$\begin{vmatrix}
61 & -91 & 66 & 68 \\
19 & 63 & 63 & 47 \\
-45 & -82 & -75 & 63 \\
39 & -28 & -18 & -26
\end{vmatrix}$$

$$\begin{vmatrix}
5 & -3 & 4 \\
9 & -6 & 8 \\
7 & -5 & -5
\end{vmatrix}$$

$$\begin{vmatrix}
3 & -11 \\
-90 & 62
\end{vmatrix}$$

$$\begin{pmatrix} -5 & -9 & -7 \\ 3 & -7 & -7 \end{pmatrix} \qquad \begin{pmatrix} -38 & -33 & -10 & | & 49 \\ -50 & -55 & -95 & | & 90 \end{pmatrix}$$

$$\begin{pmatrix}
57 & -46 & 26 & | & -7 \\
86 & -81 & -57 & | & 52
\end{pmatrix}$$

$$\begin{pmatrix}
6 & 0 \\
-8 & 3
\end{pmatrix}$$

$$\begin{pmatrix} 62 & 80 \\ 88 & 24 \\ 85 & 69 \\ 17 & -98 \end{pmatrix} \qquad \begin{vmatrix} 2 & 0 \\ -2 & -9 \end{vmatrix}$$

$$\begin{pmatrix} 36 & 94 \\ -60 & -32 \\ -75 & -30 \end{pmatrix} \qquad \begin{pmatrix} 16 & -51 & 47 & 98 & 51 \\ -67 & -10 & -56 & -34 & -49 \end{pmatrix}$$

$$\begin{vmatrix} -5 & 4 & -2 & 8 \\ -4 & 9 & -7 & 4 \\ 4 & 0 & -7 & -4 \\ 6 & -4 & -6 & 0 \end{vmatrix} \quad \begin{pmatrix} 4 & 1 & 3 & 1 & -6 \\ -4 & -2 & -8 & 2 & -1 \\ -6 & -2 & 5 & -5 & 2 \\ -1 & 7 & -2 & -9 & 0 \end{pmatrix}$$

$$\left(\begin{array}{ccc}
9 & -7 & 7 \\
6 & 9 & -8
\end{array}\right) \qquad \left|\begin{array}{cccc}
-7 & -2 & 3 \\
0 & 2 & 8 \\
-2 & -3 & -2
\end{array}\right|$$

$$\begin{pmatrix} -15 & 36 & -26 & 54 & 93 \\ -66 & -9 & 57 & 78 & -32 \\ 40 & 26 & 71 & -54 & 98 \end{pmatrix} - \begin{pmatrix} 63 \\ -43 \\ 74 \end{pmatrix} \begin{pmatrix} 0 & -5 & -4 & 8 & 1 \\ 8 & -6 & -5 & 7 & 0 \\ -3 & -3 & 7 & -5 & 4 \\ -6 & 8 & -1 & 6 & 3 \end{pmatrix}$$

$$\begin{vmatrix} -496 & 653 & 476 \\ 804 & 91 & 983 \\ -251 & 272 & 264 \end{vmatrix} \begin{vmatrix} -205 & 283 & 423 & 235 & 439 \\ 712 & -527 & 98 & 860 & 556 \\ -706 & 820 & -528 & -808 & 826 \\ 46 & 872 & 611 & 804 & -891 \end{vmatrix}$$

$$\begin{pmatrix}
-8 & -4 & -1 \\
8 & 6 & -9 \\
0 & 8 & 5 \\
-3 & -3 & 2
\end{pmatrix}$$

$$\begin{pmatrix}
39 & -30 \\
-52 & 15 \\
54 & -24 \\
4 & 57
\end{pmatrix}$$

$$\left(\begin{array}{cccc} -46 & -97 & -12 & -66 \\ -96 & -44 & -8 & -61 \end{array}\right) \quad \left(\begin{array}{ccccc} 39 & -6 & 50 & -10 \\ 73 & 22 & -72 & 13 \end{array}\right)$$

$$\left| \begin{array}{cccc}
3 & 9 \\
-1 & 7
\end{array} \right| 
\left( \begin{array}{ccccc}
2 & 6 & 2 & 4 \\
5 & -3 & -8 & 8
\end{array} \right)$$

$$\left(\begin{array}{ccc|c}
-336 & 392 & -684 \\
934 & -855 & -864
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-5 & 9 & 0 & -8 \\
5 & -5 & 9 & 3 \\
-6 & 9 & -3 & 9
\end{array}\right)$$

$$\begin{pmatrix}
94 & -63 & -48 & 5 \\
30 & -61 & 48 & -45 \\
36 & 29 & -39 & -15 \\
37 & 11 & -39 & 87
\end{pmatrix}$$

$$\begin{pmatrix}
3 & -3 & | & 4 \\
7 & -8 & | & -3
\end{pmatrix}$$

$$\begin{pmatrix} 1 & 6 \\ -5 & 3 \\ 9 & 3 \\ -3 & -6 \end{pmatrix} \qquad \begin{pmatrix} -635 & -269 & 425 & 857 \\ -360 & -594 & -863 & -17 \\ -358 & -943 & -730 & 132 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-9 & -4 & -9 & -7 \\
1 & 0 & 7 & -7
\end{array}\right)
\left(\begin{array}{ccc|c}
3 & 7 & -3 & 6 & 3 & -7 \\
4 & 2 & 6 & 6 & 3 & 2 \\
8 & -6 & -6 & 3 & 3 & 9 \\
4 & 1 & 8 & -7 & -5 & 9
\end{array}\right)$$

$$\left(\begin{array}{cc|c}
-7 & -9 & 6 \\
9 & 0 & 3
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-38 & -30 & 4 \\
-56 & -33 & 10 \\
-7 & 59 & 61
\end{array}\right)$$

$$\begin{pmatrix}
-56 & -91 & -58 & 83 & 84 \\
35 & -45 & 10 & 61 & 59 \\
-90 & 97 & 62 & 22 & 72
\end{pmatrix}$$

$$\begin{pmatrix}
-9 & -2 \\
3 & 6
\end{pmatrix}$$

$$\begin{vmatrix}
-2 & 1 & -5 \\
8 & 1 & 6 \\
-1 & 6 & -1
\end{vmatrix}$$

$$\begin{vmatrix}
-32 & -46 \\
-35 & 54
\end{vmatrix}$$

$$\begin{pmatrix} 82 & -90 \\ 47 & -30 \end{pmatrix} \qquad \begin{pmatrix} -43 & -32 & 95 & -91 & -88 \\ 56 & -27 & -72 & -70 & -92 \end{pmatrix}$$

$$\begin{vmatrix}
-19 & -2 \\
42 & -53
\end{vmatrix} \qquad \begin{pmatrix}
526 & -290 \\
-97 & 406 \\
-869 & 717 \\
255 & -485
\end{pmatrix}$$

$$\left| \begin{array}{ccc}
-55 & 48 \\
-12 & -85
\end{array} \right| \qquad \left( \begin{array}{cccc}
35 & 55 & 7 \\
33 & 55 & 24 \\
93 & 32 & 82
\end{array} \right)$$

$$\begin{pmatrix} -15 & 85 \\ 6 & -95 \\ -34 & 9 \end{pmatrix} \qquad \begin{vmatrix} 40 & -62 & 76 & 52 \\ -71 & -98 & -63 & -95 \\ 38 & 2 & 88 & -57 \\ -42 & -80 & 97 & -11 \end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
-3 & 8 & -2 & 9 & 6 \\
8 & 1 & -3 & -8 & -3
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
5 & -2 & 5 \\
-4 & 3 & -8
\end{array}\right)$$

$$\begin{vmatrix} -1 & 8 \\ 4 & -1 \end{vmatrix} \begin{vmatrix} 67 & 23 & 84 & -1 & -41 & 1 \\ 60 & 79 & -65 & 97 & 44 & -44 \\ -89 & 90 & -96 & 48 & 54 & 22 \\ 37 & -39 & 72 & -54 & 78 & -25 \\ 42 & -5 & 12 & 18 & -11 & 98 \end{vmatrix}$$

$$\begin{vmatrix} 7 & 32 & 53 & -3 \\ 81 & 74 & 74 & 24 \\ 52 & 97 & -99 & 37 \\ 65 & -95 & 54 & -38 \end{vmatrix} \qquad \begin{vmatrix} 9 & 5 & 8 & -5 \\ 5 & 1 & -4 & -1 \\ -3 & 8 & 5 & -4 \\ 3 & -7 & -7 & 7 \end{vmatrix}$$

$$\begin{pmatrix} -44 & 88 \\ -16 & 0 \\ -75 & -46 \\ -28 & -85 \end{pmatrix} \qquad \begin{pmatrix} -6 & 6 & -4 & 4 & 4 & | & -8 \\ 3 & 9 & 4 & -5 & -4 & | & 0 \\ -5 & 6 & -4 & 0 & -7 & | & 2 \end{pmatrix}$$

$$\begin{pmatrix}
0 & 8 & 9 \\
9 & -3 & 0 \\
7 & -4 & -2 \\
4 & -2 & -2 \\
-4 & -4 & -9
\end{pmatrix}$$

$$\begin{pmatrix}
7 & -8 \\
-8 & 6
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
50 & -39 & -68 \\
39 & 58 & 46
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-6 & 4 & 8 & -1 & 1 & -9 \\
2 & 9 & 2 & -3 & 0 & -7
\end{array}\right)$$

$$\begin{vmatrix} 237 & 55 \\ 286 & -359 \end{vmatrix} \qquad \begin{pmatrix} -5 & 3 & 1 & -6 & | & -5 \\ -4 & -3 & -7 & 7 & | & -6 \\ 9 & 2 & 0 & 0 & | & 1 \\ 1 & -6 & -8 & 9 & | & 3 \end{pmatrix}$$

$$\begin{pmatrix}
55 & -99 & -49 \\
-58 & 21 & -24 \\
69 & 68 & -35
\end{pmatrix}$$

$$\begin{vmatrix}
-4 & -5 & -9 \\
-3 & -4 & 3 \\
-5 & 4 & 3
\end{vmatrix}$$

$$\begin{vmatrix}
1 & -8 & -8 \\
4 & 6 & -4 \\
6 & 2 & -7
\end{vmatrix}$$

$$\begin{pmatrix}
27 & 99 & 45 & 65 & 97 \\
64 & -4 & 29 & -38 & -20 \\
12 & 38 & 25 & 16 & 70 \\
-68 & -5 & -89 & 36 & -1
\end{pmatrix}$$

$$\begin{vmatrix} -1 & 1 \\ -3 & 1 \end{vmatrix} \begin{vmatrix} 243 & -724 & -982 & -606 & 774 & 308 \\ 221 & 729 & 940 & -156 & 115 & -420 \\ 793 & 78 & 521 & -467 & -120 & -716 \\ -286 & 320 & 901 & 520 & 994 & 280 \\ -906 & 805 & 325 & -143 & 530 & -971 \end{vmatrix}$$

$$\begin{bmatrix} 4 & 3 & -3 & 7 \\ 4 & 0 & -8 & 2 \\ -7 & 3 & 8 & 1 \\ 9 & 3 & -5 & -4 \end{bmatrix} \qquad \begin{pmatrix} 3 & 0 & 7 \\ -7 & 5 & 0 \\ 6 & -3 & -7 \end{pmatrix}$$

$$\begin{pmatrix}
-5 & -6 & | & -2 \\
-2 & 9 & | & -1
\end{pmatrix} \qquad \qquad \begin{pmatrix}
-2 & -47 & 82 & | & -19 \\
95 & 2 & 47 & | & 99
\end{pmatrix}$$

$$\begin{vmatrix} 620 & -323 & -89 \\ -473 & 629 & 465 \\ 923 & 193 & 301 \end{vmatrix} \begin{pmatrix} -54 & 73 & -87 & -44 & -35 \\ 10 & -96 & -54 & -92 & -16 \\ -19 & -3 & -83 & 31 & 45 \\ 59 & 94 & -7 & 63 & 47 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
41 & -35 & -3 \\
16 & -65 & -95
\end{array}\right) \qquad \left(\begin{array}{cccc|c}
2 & -7 & 4 & 1 & -2 \\
-4 & -1 & -6 & 2 & -4
\end{array}\right)$$

$$\begin{pmatrix}
-51 & 2 & | & -42 \\
-36 & -35 & | & -34
\end{pmatrix} \qquad \begin{pmatrix}
67 & 65 \\
-8 & 24 \\
72 & -53
\end{pmatrix}$$

$$\begin{pmatrix}
-542 & 183 & -238 & | & -570 \\
-423 & -612 & 965 & | & 942
\end{pmatrix}
\begin{pmatrix}
-5 & -8 & 5 \\
0 & 5 & 8 \\
1 & 6 & -7 \\
-8 & 8 & 3 \\
0 & -4 & -6
\end{pmatrix}$$

$$\begin{pmatrix}
2 & -4 & -2 \\
-4 & 9 & -8 \\
9 & -5 & 5
\end{pmatrix}$$

$$\begin{pmatrix}
2 & 6 & 5 \\
-5 & -1 & -5
\end{pmatrix}$$

$$\left(\begin{array}{cccc}
-5 & -9 \\
1 & 8
\end{array}\right) \qquad \left|\begin{array}{ccccc}
-1 & 2 & 5 & 4 \\
-7 & -1 & 5 & -9 \\
0 & -5 & 2 & 2 \\
8 & 1 & -2 & 3
\end{array}\right|$$

$$\left(\begin{array}{ccc|c}
7 & 5 & 8 & 7 & 2 \\
-8 & 4 & 2 & -1 & 8
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
-37 & 41 & 99 \\
-44 & 33 & 54 \\
-91 & 85 & -18
\end{array}\right|$$

$$\begin{vmatrix}
-6 & -2 & 2 \\
-8 & 9 & -8 \\
6 & 0 & -9
\end{vmatrix}$$

$$\begin{pmatrix}
-92 & 26 & 22 \\
-99 & 13 & 4
\end{pmatrix}$$

$$\begin{vmatrix}
-26 & 38 & -45 \\
22 & 87 & 92 \\
63 & -66 & 56
\end{vmatrix}$$

$$\begin{pmatrix}
-7 & 7 & 0 \\
0 & 0 & 3 \\
6 & 7 & 6 \\
8 & -4 & -7
\end{pmatrix}$$

$$\left(\begin{array}{cccc}
-56 & 54 & 46 \\
-97 & 73 & -5
\end{array}\right) \qquad \left|\begin{array}{ccccc}
-4 & -6 & -3 \\
2 & 7 & 2 \\
-3 & -1 & 1
\end{array}\right|$$

$$\begin{pmatrix} -44 & 55 & -71 & -3 & -60 & | & -27 \\ -94 & 42 & -61 & -13 & 70 & | & -96 \\ -23 & -14 & 90 & -49 & 95 & | & 45 \end{pmatrix} \qquad \begin{vmatrix} 0 & 2 \\ 2 & -4 \end{vmatrix}$$

$$\begin{vmatrix}
36 & -28 & -8 \\
-51 & -28 & -30 \\
-22 & 7 & -83
\end{vmatrix}
\qquad
\left(\begin{array}{c|c}
-8 & 1 & -5 \\
9 & 6 & 4
\end{array}\right)$$

$$\begin{pmatrix} 1 & 1 \\ 5 & 0 \\ 3 & 8 \end{pmatrix} \qquad \begin{pmatrix} 52 & -93 & 12 & -44 \\ -68 & -85 & -94 & 47 \\ -73 & 58 & -18 & -88 \\ -6 & -14 & 7 & 78 \\ 28 & -60 & 37 & 4 \end{pmatrix}$$

$$\begin{pmatrix}
9 & -7 & -8 & -3 & 0 & 7 \\
3 & -1 & 2 & 2 & -7 & 5 \\
-6 & 6 & 4 & -3 & -2 & -4 \\
-2 & 8 & 6 & 6 & -1 & 6
\end{pmatrix}$$

$$\begin{vmatrix}
68 & 91 & | \\
25 & -13 & | \\
\end{vmatrix}$$

$$\begin{pmatrix} 66 & -5 & -64 & -34 \\ 63 & -88 & 24 & -56 \\ 36 & 2 & -41 & 66 \end{pmatrix} \qquad \begin{pmatrix} 72 & -90 & -4 \\ -71 & 27 & 26 \end{pmatrix}$$

$$\begin{pmatrix}
75 & 7 & -25 & 49 & 32 \\
-74 & 92 & 95 & -77 & -68 \\
-51 & 13 & 39 & 69 & -87
\end{pmatrix}$$

$$\begin{pmatrix}
3 & -94 & 65 \\
88 & -43 & 96
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
15 & -77 & -75 \\
39 & 28 & 9
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
3 & 0 & 4 & -4 & 6 & -5 \\
9 & 7 & 3 & -5 & -1 & -6 \\
7 & 7 & 9 & -4 & 4 & -3
\end{array}\right)$$

$$\begin{vmatrix}
-6 & 8 & 2 & -3 \\
7 & 8 & -2 & 2 \\
-7 & 1 & 1 & 0 \\
-6 & 2 & -1 & -8
\end{vmatrix}$$

$$\begin{pmatrix}
22 & 55 & 49 & | -59 \\
60 & -56 & -2 & | 28
\end{pmatrix}$$

$$\begin{pmatrix}
20 & 72 & -20 \\
30 & -38 & 19 \\
96 & -39 & -29 \\
3 & 72 & -44
\end{pmatrix}$$

$$\begin{vmatrix}
84 & 33 \\
-84 & 99
\end{vmatrix}$$

$$\begin{pmatrix}
9 & -1 & -6 \\
-7 & -9 & 5 \\
-6 & 6 & 9
\end{pmatrix}
\qquad
\begin{pmatrix}
-7 & -6 & | & -6 \\
-2 & -1 & | & 4
\end{pmatrix}$$

$$\begin{pmatrix}
-1 & 7 & -1 & 0 \\
4 & -4 & 2 & -7
\end{pmatrix}
\begin{pmatrix}
3 & 2 & 9 & 2 & 2 & -9 \\
-8 & 4 & -3 & -3 & -2 & -2 \\
3 & -3 & 8 & 8 & 9 & 6 \\
-2 & 3 & -6 & -7 & 9 & -9 \\
4 & -7 & -6 & -8 & 6 & -5
\end{pmatrix}$$

$$\begin{pmatrix} -15 & 16 & -67 & -14 \\ -26 & -72 & -50 & -81 \\ 73 & 1 & 3 & 54 \end{pmatrix} \qquad \begin{pmatrix} 3 & -5 & 9 & -5 \\ 9 & -8 & -1 & 1 \end{pmatrix}$$

$$\begin{vmatrix}
-6 & -9 & -2 \\
0 & 5 & -3 \\
9 & -7 & 3
\end{vmatrix}$$

$$\begin{pmatrix}
-5 & 0 & -2 & -2 & 6 \\
6 & -5 & 1 & 4 & 2 \\
-7 & -2 & 0 & 8 & 6 \\
3 & -4 & 8 & -5 & -3 \\
-7 & 2 & 6 & 4 & 6
\end{pmatrix}$$

$$\begin{pmatrix}
34 & -39 \\
17 & -54 \\
51 & -89
\end{pmatrix}$$

$$\begin{pmatrix}
5 & 2 \\
-6 & 1
\end{pmatrix}$$

$$\left(\begin{array}{ccc|ccc|c} 4 & -2 & 3 & 5 & -9 & 8 \\ -8 & 8 & -8 & 7 & 1 & 2 \end{array}\right) \left(\begin{array}{cccc|ccc|c} -96 & -22 & 25 & -58 & -31 \\ -58 & 50 & 49 & 65 & 82 \\ 42 & 73 & -91 & -33 & -50 \end{array}\right)$$

$$\begin{pmatrix} -1 & 7 \\ 8 & 7 \\ -1 & -6 \\ 1 & -8 \end{pmatrix} \qquad \begin{pmatrix} 456 & 529 \\ -8 & -636 \\ 611 & 953 \\ -186 & 86 \end{pmatrix}$$

$$\begin{pmatrix}
73 & 5 & 58 & | & -37 \\
-16 & 48 & 69 & | & -67 \\
-40 & -72 & -57 & | & 28
\end{pmatrix}
\qquad
\begin{vmatrix}
94 & -69 & 10 \\
7 & -54 & -35 \\
-38 & 48 & 23
\end{vmatrix}$$

$$\left(\begin{array}{cc|c} -6 & 4 & -1 \\ 9 & 4 & -3 \end{array}\right) \qquad \left(\begin{array}{cc|cc|c} -7 & -3 & -9 & -1 & -2 & 2 \\ 8 & -7 & -5 & 0 & 2 & -6 \end{array}\right)$$

$$\begin{pmatrix} -58 & 9 \\ -10 & 27 \\ -64 & -78 \end{pmatrix} \qquad \begin{pmatrix} -69 & -50 & 35 & -81 & -95 \\ -82 & -60 & 0 & 83 & -80 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
6 & -5 & 0 & -9 \\
1 & 0 & 8 & 3
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
4 & -1 & -4 \\
-3 & -5 & 0
\end{array}\right)$$

$$\begin{pmatrix}
326 & -163 & 414 & | & -248 \\
478 & -611 & -182 & | & -670 \\
955 & 655 & -817 & | & 391
\end{pmatrix}$$

$$\begin{pmatrix}
2 & 2 & -5 \\
5 & -7 & 3 \\
8 & 8 & 5
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-8 & 0 & 5 & -3 \\
2 & 1 & 0 & -6
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
96 & 86 & -9 & 54 & 33 \\
-15 & -55 & 52 & 81 & 93 \\
84 & 83 & -93 & 16 & 93
\end{array}\right)$$

$$\begin{vmatrix} -4 & 9 \\ -7 & -6 \end{vmatrix}$$
  $\begin{vmatrix} 1 & 3 \\ 8 & 9 \end{vmatrix}$ 

$$\begin{pmatrix}
6 & -8 & -4 & | & -6 \\
-3 & -3 & 3 & | & -2 \\
7 & 1 & 6 & | & 7
\end{pmatrix}
\begin{pmatrix}
-66 & 85 & -52 & 36 & 91 & | & -76 \\
22 & 72 & 84 & -72 & 2 & | & -11 \\
-60 & -98 & 0 & -62 & -45 & | & -24 \\
-28 & 94 & -4 & -84 & -56 & | & 83
\end{pmatrix}$$

$$\begin{pmatrix}
-80 & -47 & 1 & -66 & -25 \\
-29 & 56 & 69 & 55 & -38 \\
-43 & -90 & -4 & -20 & 65
\end{pmatrix}
\begin{vmatrix}
5 & -7 & 6 & 4 \\
-7 & -6 & -5 & -8 \\
-9 & -7 & -5 & -4 \\
-9 & 8 & 3 & 2
\end{vmatrix}$$

$$\begin{pmatrix}
2 & 6 & 6 & -6 & -3 & 9 \\
8 & 6 & 4 & -4 & -6 & 7 \\
-6 & -7 & 0 & 3 & -6 & 5 \\
-7 & -8 & 3 & -9 & 9 & -3
\end{pmatrix}
\begin{vmatrix}
-59 & 57 & -4 \\
61 & 5 & -89 \\
-80 & 76 & 1
\end{vmatrix}$$

$$\begin{vmatrix}
-9 & 2 & -3 \\
7 & 3 & 6 \\
-7 & -8 & 6
\end{vmatrix}$$

$$\begin{vmatrix}
 26 & 29 & -6 & 92 \\
 32 & 17 & 73 & 49 \\
 73 & 63 & 53 & 42 \\
 22 & -91 & 9 & 80
 \end{vmatrix}$$

$$\begin{pmatrix}
-9 & 4 \\
-5 & 2 \\
-6 & -6 \\
5 & 7
\end{pmatrix}$$

$$\left(\begin{array}{cc|c} -32 & -49 & 91 \\ -34 & 59 & 76 \end{array}\right)$$

$$\begin{vmatrix}
-3 & -3 & 5 \\
-6 & 6 & 5 \\
-1 & 4 & 1
\end{vmatrix}$$

$$\begin{pmatrix}
3 & 5 & -9 & 0 \\
-1 & 0 & -3 & -1 \\
2 & 9 & -5 & -7 \\
-1 & -6 & -1 & -4
\end{pmatrix}$$

$$\left(\begin{array}{cc} 9 & 7 \\ 7 & 4 \end{array}\right)$$

$$\left(\begin{array}{ccc} -5 & -1 & -2 \\ 7 & 4 & -5 \end{array}\right)$$

$$\begin{pmatrix} 48 & 41 & 91 \\ -22 & 45 & -61 \\ 24 & -91 & 10 \\ 35 & -43 & -63 \end{pmatrix} \qquad \begin{pmatrix} 5 & -8 & 2 \\ -1 & -9 & 7 \\ 6 & 8 & 8 \end{pmatrix}$$

$$\left(\begin{array}{ccc}
5 & -8 & 2 \\
-1 & -9 & 7 \\
6 & 8 & 8
\end{array}\right)$$

$$\left( \begin{array}{ccc|c} -448 & -373 & 400 & 953 & -490 & -690 \\ 941 & 618 & -449 & 108 & -930 & -912 \end{array} \right) \left( \begin{array}{ccc|c} -5 & -8 & 4 \\ -1 & 8 & -5 \end{array} \right)$$

$$\left(\begin{array}{cccc}
9 & 0 & 9 & -9 \\
0 & 1 & 5 & -9 \\
5 & 3 & 6 & 7
\end{array}\right) \qquad \left(\begin{array}{ccc}
0 & -2 \\
-5 & -6 \\
-6 & 4
\end{array}\right)$$

$$\begin{pmatrix}
36 & 21 & -34 & -19 & 33 & | & -47 \\
14 & -17 & -54 & -26 & 50 & | & 51 \\
28 & -76 & -99 & -29 & 94 & | & 59 \\
43 & 44 & -48 & 3 & -49 & | & -79 \\
71 & -83 & 12 & 68 & 36 & | & 63
\end{pmatrix}
\begin{vmatrix}
-264 & 912 \\
-701 & -437
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
1 & 9 & -1 \\
-7 & -7 & 8
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
73 & -47 & -13 & -91 \\
-97 & 59 & 64 & -33 \\
-55 & -73 & 3 & 33
\end{array}\right)$$

$$\left|\begin{array}{ccc|c} 7 & -8 \\ 9 & 8 \end{array}\right| \qquad \left(\begin{array}{ccc|c} -33 & 4 & -12 & -98 & -73 \\ -44 & -41 & -47 & 21 & 28 \\ -26 & 46 & 6 & -17 & 10 \end{array}\right)$$

$$\begin{vmatrix}
 3 & 9 & 5 & -6 \\
 2 & 4 & 9 & 0 \\
 -5 & 5 & -4 & -2 \\
 7 & 8 & 0 & 0
 \end{vmatrix}
 \begin{vmatrix}
 9 & -4 \\
 -1 & -5
 \end{vmatrix}$$

$$\begin{pmatrix} -996 & -386 & -540 \\ 316 & -148 & -657 \\ 676 & -428 & 788 \\ -40 & -431 & 163 \end{pmatrix} \qquad \begin{pmatrix} 1 & -8 & 9 \\ -2 & 4 & 2 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
11 & -62 & -32 & -15 \\
37 & -19 & -29 & -21
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
1 & -3 \\
-2 & -2 \\
-6 & -9 \\
-3 & 0 \\
-7 & -1
\end{array}\right)$$

$$\begin{vmatrix} -62 & -81 \\ -71 & 37 \end{vmatrix} \qquad \begin{pmatrix} -2 & -9 \\ -8 & 6 \\ 7 & -9 \\ 5 & 7 \end{pmatrix}$$

$$\begin{vmatrix}
-58 & -71 \\
81 & -84
\end{vmatrix}$$

$$\begin{vmatrix}
78 & 85 & 46 \\
-74 & -66 & 80 \\
23 & -27 & 17
\end{vmatrix}$$

$$\begin{vmatrix}
-5 & 3 & 9 \\
0 & 3 & 4 \\
-4 & 7 & -5
\end{vmatrix}$$

$$\begin{vmatrix}
-8 & 7 \\
-2 & 5
\end{vmatrix}$$

$$\begin{pmatrix}
-3 & -6 & 6 \\
-7 & -1 & -8 \\
8 & -6 & -5
\end{pmatrix}
\qquad
\begin{pmatrix}
9 & -9 & -4 & 6 \\
-1 & 6 & 3 & -9
\end{pmatrix}$$

$$\begin{vmatrix}
-8 & 2 & 2 & -4 \\
9 & -3 & -2 & 9 \\
5 & -1 & 6 & 4 \\
0 & 9 & -5 & 0
\end{vmatrix}$$

$$\begin{vmatrix}
-5 & -9 & -1 & 0 \\
7 & 9 & 7 & 7 \\
1 & 6 & -3 & -6 \\
-9 & 4 & -1 & 4
\end{vmatrix}$$

$$\begin{pmatrix} 8 & -4 \\ 2 & 1 \\ 8 & -9 \end{pmatrix} \qquad \begin{pmatrix} -36 & 98 & 61 & -90 & 22 \\ 13 & 50 & 49 & -21 & -98 \\ -74 & -60 & 74 & -3 & -90 \\ 1 & -52 & 67 & 48 & 95 \\ 39 & 29 & 59 & -27 & -72 \end{pmatrix}$$

$$\left(\begin{array}{ccc}
4 & -1 & 2 \\
5 & -1 & 8
\end{array}\right) \qquad \left(\begin{array}{ccc}
2 & -3 \\
-2 & 5
\end{array}\right)$$

$$\left(\begin{array}{cccc}
5 & 0 & -5 & 0 \\
4 & 7 & 0 & 2
\end{array}\right) \qquad \left(\begin{array}{cccc}
4 & 95 \\
23 & 76 \\
-22 & 34 \\
42 & 69
\end{array}\right)$$

$$\begin{pmatrix} -1 & -6 & | & -9 \\ -3 & -4 & | & 2 \end{pmatrix} \qquad \begin{pmatrix} 507 & -41 & -321 & 683 \\ -648 & 74 & -924 & -429 \end{pmatrix}$$

$$\left(\begin{array}{ccccc}
-1 & -9 & 9 & -5 \\
-3 & -8 & 3 & -1
\end{array}\right) \quad \left(\begin{array}{cccccc}
8 & 5 & 9 & 9 & 5 \\
0 & 7 & 9 & -7 & -7 \\
-7 & -4 & 8 & 1 & -3
\end{array}\right)$$

$$\begin{pmatrix}
54 & -2 \\
83 & -66 \\
-32 & 75 \\
43 & 37
\end{pmatrix}
\qquad
\begin{pmatrix}
9 & -4 & -6 & | & 6 \\
4 & 9 & -4 & | & 8 \\
6 & -7 & -9 & | & 5
\end{pmatrix}$$

$$\begin{pmatrix}
91 & -25 & -12 & -75 & | & 12 \\
-24 & -43 & -72 & -11 & | & 66 \\
35 & 16 & 42 & 27 & | & 83 \\
74 & -3 & -19 & -13 & | & 21
\end{pmatrix}$$

$$\begin{vmatrix}
8 & -6 & | \\
-2 & 6 & |
\end{vmatrix}$$

$$\begin{pmatrix} -9 & 8 & -5 & 5 \\ 4 & -5 & 6 & -4 \\ 9 & -3 & 9 & -6 \end{pmatrix} \begin{pmatrix} -464 & 685 & -781 & 454 & -826 & -508 \\ -166 & -411 & 756 & 438 & 716 & 548 \end{pmatrix}$$

$$\begin{pmatrix} 26 & -972 & 517 & 267 & 234 & 371 \\ -568 & -902 & -824 & -393 & 373 & -39 \\ -378 & -658 & -857 & 303 & -123 & -602 \\ 911 & 671 & 300 & 311 & -244 & -554 \\ 224 & 774 & 605 & 821 & 252 & -915 \end{pmatrix} \begin{pmatrix} 8 & -9 & 0 \\ -5 & -1 & -2 & -915 \end{pmatrix}$$

$$\begin{pmatrix} -59 & -57 & -60 & -87 & 61 & 51 \\ 30 & 19 & 28 & 66 & -72 & 44 \\ -86 & -8 & -32 & -36 & -76 & -89 \\ -75 & -74 & 86 & -65 & -59 & 7 \\ 41 & 59 & 82 & -88 & 60 & 33 \end{pmatrix} \begin{pmatrix} -72 & -55 & 67 & -87 \\ 11 & -59 & 17 & -8 \\ 21 & 47 & 30 & 66 \end{pmatrix}$$

$$\begin{vmatrix} -34 & -61 & 28 \\ -20 & -58 & 72 \\ -16 & 69 & 71 \end{vmatrix} \begin{pmatrix} 977 & -763 & -852 & 503 & 804 & -168 \\ 603 & -404 & 616 & -381 & -559 & 693 \\ -226 & 518 & 428 & 648 & 349 & 718 \\ -431 & 203 & 639 & 782 & -2 & 724 \end{pmatrix}$$

$$\begin{pmatrix}
-2 & 7 & -4 \\
-2 & -8 & 6
\end{pmatrix} \qquad \qquad \begin{pmatrix}
63 & -52 \\
-20 & -77
\end{pmatrix}$$

$$\begin{vmatrix} 43 & 30 & -91 \\ 11 & 68 & 77 \\ -29 & -44 & -23 \end{vmatrix} \qquad \begin{pmatrix} -8 & -8 \\ -9 & -2 \end{pmatrix}$$

$$\begin{pmatrix} -8 & 87 & 70 & 9 \\ 88 & -43 & -57 & 80 \\ 90 & 58 & 45 & -91 \end{pmatrix} \begin{pmatrix} -21 & 90 & -62 & 58 & 34 & -62 \\ 88 & 35 & -85 & 51 & 35 & 5 \\ -97 & 32 & 94 & 83 & -40 & 33 \\ -68 & 5 & -54 & 5 & -67 & -7 \\ -22 & -46 & 75 & 86 & 19 & 58 \end{pmatrix}$$

$$\begin{vmatrix} 99 & -182 & -189 \\ 364 & 679 & -657 \\ 536 & 245 & -45 \end{vmatrix} \begin{pmatrix} 46 & -4 & 97 & 75 & 68 \\ 49 & 79 & -20 & 39 & 92 \\ 30 & 76 & 82 & -70 & -68 \\ 51 & 93 & 17 & 59 & 47 \end{pmatrix}$$

$$\begin{pmatrix}
-33 & -21 & -80 \\
76 & 33 & -4
\end{pmatrix}$$

$$\begin{pmatrix}
2 & 3 & -8 & -2 \\
2 & -5 & -6 & -3 \\
-9 & 0 & 1 & -4 \\
-6 & 5 & 4 & -3
\end{pmatrix}$$

$$\left( \begin{array}{ccc|c} -92 & -73 & 77 & -38 \\ -76 & 97 & 22 & -17 \end{array} \right) \left( \begin{array}{ccc|c} 49 & 36 & 1 & -85 & 15 \\ 58 & 82 & 82 & 2 & -8 \\ -57 & -57 & -18 & -58 & -41 \end{array} \right)$$

$$\begin{vmatrix}
14 & -13 \\
-49 & -84
\end{vmatrix}$$

$$\begin{vmatrix}
3 & -1 & 9 & 6 \\
-6 & -8 & -2 & -5 \\
-7 & 2 & -6 & 9 \\
-1 & -6 & 2 & 2
\end{vmatrix}$$

$$\left(\begin{array}{ccccc} 3 & -1 & -6 & -6 & -9 \\ 7 & 6 & 3 & -8 & -7 \end{array}\right) \quad \left(\begin{array}{ccccc} -19 & -58 & -97 & 85 \\ 35 & 57 & 53 & 45 \end{array}\right)$$

$$\begin{pmatrix}
-6 & -6 \\
0 & -8 \\
4 & -3 \\
8 & 0 \\
3 & -4
\end{pmatrix}$$

$$\begin{vmatrix}
4 & -4 \\
3 & -7
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
-46 & -86 & -48 & 9 & 86 \\
89 & 39 & -74 & -31 & 76
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
12 & 53 & \\
-87 & 9 & \\
\end{array}\right|$$

$$\begin{pmatrix}
-413 & -370 & 432 & -114 \\
286 & 538 & -922 & 972 \\
256 & 592 & -902 & -563
\end{pmatrix}$$

$$\begin{pmatrix}
56 & -91 \\
-25 & 63 \\
18 & -39
\end{pmatrix}
\qquad
\begin{pmatrix}
-8 & -9 & 5 & | & 8 \\
0 & -8 & -4 & | & -9 \\
9 & -9 & -8 & | & -4
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
3 & -9 & -3 \\
9 & -9 & 5
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-3 & 7 & -1 & 2 \\
-2 & -7 & 8 & -9
\end{array}\right)$$

$$\begin{pmatrix} -395 & -927 & 833 & 593 & | & -698 \\ -47 & 59 & 242 & 364 & 516 \\ 601 & -619 & -141 & -249 & | & -454 \end{pmatrix} \begin{pmatrix} 8 & -1 & -3 & -5 \\ 2 & 4 & 4 & 8 \\ 6 & 7 & -8 & 1 \\ 3 & 8 & -8 & 5 \\ -3 & 8 & -8 & -8 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-2 & -5 & -7 \\
7 & 5 & 3
\end{array}\right)
\left(\begin{array}{cccc|c}
10 & 21 & 49 & -54 & 34 \\
-16 & 7 & -89 & -61 & 3 \\
44 & -79 & 61 & -90 & -88 \\
33 & -3 & 51 & -35 & -62
\end{array}\right)$$

$$\left(\begin{array}{ccccc}
-4 & 3 & 1 & 6 & 7 \\
2 & 5 & 5 & 6 & -4
\end{array}\right) 
\qquad \left(\begin{array}{ccccc}
3 & 7 \\
0 & 4
\end{array}\right)$$

$$\begin{pmatrix} -479 & -809 \\ -60 & -869 \\ 841 & 215 \\ 980 & -681 \end{pmatrix} \qquad \begin{pmatrix} -65 & 70 & | & -18 \\ 85 & 9 & | & -43 \end{pmatrix}$$

$$\begin{pmatrix}
63 & 78 \\
-62 & -61
\end{pmatrix}$$

$$\begin{vmatrix}
-9 & -1 & -7 & 1 \\
-6 & 1 & -3 & 6 \\
-2 & 5 & 3 & 4 \\
9 & -2 & -6 & 3
\end{vmatrix}$$

$$\begin{pmatrix}
4 & -6 & 6 & 3 & 3 & 0 \\
8 & -5 & -3 & -4 & 4 & -5 \\
3 & 6 & 9 & -6 & -4 & 4
\end{pmatrix}
\begin{pmatrix}
88 & 59 & -76 & -54 \\
-61 & 37 & -37 & -98 \\
46 & -79 & 88 & -72
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-1 & -1 & -7 & 1 & 5 & -9 \\
-8 & 4 & -8 & 0 & 0 & 4
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
-9 & 2 & 8 & 0 \\
1 & 1 & -8 & 1 \\
-5 & -1 & 3 & -2 \\
1 & 1 & 8 & 8
\end{array}\right|$$

$$\left(\begin{array}{ccc|c} 3 & -3 & 1 & 5 & 3 & -1 \\ -9 & 0 & -9 & 6 & 9 & 0 \end{array}\right) \quad \left(\begin{array}{ccc|c} -108 & 478 & -51 \\ -250 & 313 & -369 \end{array}\right)$$

$$\begin{pmatrix}
2 & -9 \\
-9 & -2 \\
-5 & -8 \\
7 & -7
\end{pmatrix}
\begin{pmatrix}
21 & -17 & -3 & 89 & -45 & -11 \\
88 & 2 & 82 & 98 & 35 & 39 \\
20 & 55 & 30 & -55 & 38 & -75 \\
26 & -37 & -6 & 55 & -68 & 38 \\
44 & 26 & -76 & -8 & -26 & -96
\end{pmatrix}$$

$$\begin{pmatrix}
-879 & 103 \\
132 & 213
\end{pmatrix}
\qquad
\begin{pmatrix}
6 & -1 & 8 \\
-4 & 6 & -2 \\
-8 & -3 & 4
\end{pmatrix}$$

$$\begin{pmatrix}
-71 & 52 & 14 & 38 \\
-34 & -83 & 72 & -53
\end{pmatrix}$$

$$\begin{vmatrix}
-422 & -443 & | \\
-974 & 776 & |$$

$$\begin{pmatrix} 268 & -116 & -377 & -851 \\ 159 & -562 & -13 & 429 \\ 740 & -750 & -761 & 472 \\ -962 & 607 & 484 & -368 \end{pmatrix} \begin{pmatrix} -19 & 47 & -38 & 67 & 56 \\ -15 & -49 & -26 & -1 & 81 \\ 66 & -39 & -31 & 16 & 19 \\ 53 & -40 & 19 & -36 & -98 \\ -62 & -55 & -68 & -98 & -24 \end{pmatrix}$$

$$\begin{vmatrix}
-5 & -7 & -1 \\
-6 & -2 & 2 \\
-4 & 7 & 9
\end{vmatrix}$$

$$\begin{pmatrix}
-2 & 7 & -7 & 9 \\
7 & -8 & -1 & 8 \\
7 & -6 & 9 & -9
\end{pmatrix}$$

$$\left(\begin{array}{cccc}
-31 & 81 & -76 \\
24 & 56 & 92
\end{array}\right) \qquad \left(\begin{array}{ccccc}
-57 & -79 & -27 \\
-10 & 20 & 89 \\
8 & -52 & -83
\end{array}\right)$$

$$\left(\begin{array}{ccccc}
9 & 2 & 9 & 4 & -5 \\
4 & 2 & -8 & -3 & 4
\end{array}\right) \qquad \left(\begin{array}{cccc}
55 & 43 \\
-40 & -66
\end{array}\right)$$

$$\left(\begin{array}{cc}
8 & -6 \\
1 & 5
\end{array}\right) \qquad \left(\begin{array}{ccc}
7 & -2 & 1 \\
-1 & -9 & 4
\end{array}\right)$$

$$\left(\begin{array}{ccc}
1 & 3 \\
-5 & 9
\end{array}\right) \qquad \left|\begin{array}{cccc}
2 & -5 & 9 \\
9 & -5 & -1 \\
-7 & 2 & 6
\end{array}\right|$$

$$\begin{vmatrix}
 3 & 2 & 6 & 6 \\
 7 & -3 & 9 & -7 \\
 0 & -1 & -5 & -7 \\
 -6 & -2 & 0 & 5
 \end{vmatrix}
 \begin{vmatrix}
 3 & 6 & -9 \\
 -6 & 6 & 1 \\
 -7 & 6 & -2
 \end{vmatrix}$$

$$\begin{pmatrix}
3 & -3 & 0 \\
1 & -9 & -1 \\
-3 & 4 & 7 \\
-9 & -3 & -4 \\
9 & 1 & -8
\end{pmatrix}
\begin{vmatrix}
5 & -6 & -1 \\
7 & -4 & 8 \\
6 & 1 & 2
\end{vmatrix}$$

$$\left(\begin{array}{cccc}
-9 & 7 & 3 & 2 \\
1 & 7 & -3 & 7
\end{array}\right) \qquad \left|\begin{array}{ccccc}
8 & 2 & 2 \\
-8 & -1 & 0 \\
-6 & 0 & 6
\end{array}\right|$$

$$\begin{pmatrix} -947 & -995 & 186 & 464 \\ 685 & 426 & -632 & 492 \\ -574 & 557 & 900 & -268 \end{pmatrix} \begin{pmatrix} 62 & -86 & 17 & 53 \\ 33 & -58 & 0 & -23 \end{pmatrix}$$

$$\begin{pmatrix}
-6 & -3 \\
7 & 8
\end{pmatrix} \qquad \qquad \begin{pmatrix}
11 & 43 \\
94 & -21
\end{pmatrix}$$

$$\begin{vmatrix}
29 & -23 \\
45 & -7
\end{vmatrix}$$

$$\begin{pmatrix}
-81 & -50 & -56 \\
3 & -52 & -89 \\
-61 & -30 & 11
\end{pmatrix}$$

$$\begin{pmatrix} 46 & 41 & 38 \\ 63 & -88 & -90 \\ -32 & 49 & -84 \\ -61 & 4 & 76 \end{pmatrix} \qquad \begin{vmatrix} -1 & -3 \\ -5 & -3 \end{vmatrix}$$

$$\begin{bmatrix} 3 & -7 & 9 \\ 7 & -7 & 7 \\ -4 & -9 & -4 \end{bmatrix} \qquad \begin{pmatrix} -431 & -702 & 178 & 793 \\ 830 & -367 & -89 & -59 \end{pmatrix}$$

$$\begin{pmatrix}
7 & 4 & 6 & -5 & | & 4 \\
6 & 5 & -7 & -1 & | & -6 \\
-8 & -4 & -3 & 3 & | & 8 \\
-2 & 5 & 4 & 3 & | & 3
\end{pmatrix}$$

$$\begin{pmatrix}
1 & 2 & | & -9 \\
-6 & -2 & | & -8
\end{pmatrix}$$

$$\left| \begin{array}{ccc}
-2 & -8 \\
1 & 7
\end{array} \right| 
\left| \begin{array}{cccc}
3 & 5 & 1 \\
5 & 1 & -7 \\
-8 & 7 & -6
\end{array} \right|$$

$$\begin{pmatrix}
5 & 9 & -4 & -8 & | & 6 \\
9 & -7 & -5 & -7 & | & 9 \\
-3 & -4 & -7 & -2 & | & 5
\end{pmatrix}
\qquad
\begin{pmatrix}
-7 & -61 & | & -75 \\
-43 & 59 & | & -81
\end{pmatrix}$$

$$\begin{pmatrix} 33 & 9 & 83 & -50 & 79 & -54 \\ 44 & -90 & -3 & -98 & 9 & -37 \\ -23 & 17 & -13 & 15 & 36 & 19 \\ 55 & -44 & 31 & 15 & 89 & 24 \end{pmatrix} \begin{pmatrix} 9 & 2 & -3 \\ -5 & 3 & -7 \end{pmatrix}$$

$$\begin{pmatrix}
-77 & 33 & 23 \\
48 & -25 & 56
\end{pmatrix} \qquad \qquad \begin{pmatrix}
9 & 6 \\
5 & 2
\end{pmatrix}$$

$$\begin{pmatrix} -23 & -38 \\ 89 & -83 \\ 57 & 61 \\ -39 & -69 \\ -52 & -34 \end{pmatrix} \qquad \begin{vmatrix} 8 & -6 \\ 5 & 1 \end{vmatrix}$$

$$\begin{pmatrix} -4 & -2 & -3 \\ 0 & 6 & 3 \\ -1 & -4 & 4 \end{pmatrix} \qquad \begin{vmatrix} 67 & 75 & -15 & 85 \\ -89 & -28 & 89 & 85 \\ 51 & -57 & -69 & -84 \\ 55 & 97 & 72 & 53 \end{vmatrix}$$

$$\begin{vmatrix} 71 & 47 & 80 \\ -42 & -50 & 74 \\ -33 & -17 & 90 \end{vmatrix} \begin{pmatrix} 9 & -68 & 67 & -51 & 76 \\ -55 & 71 & -86 & 94 & -30 \\ 0 & -86 & -70 & 77 & 83 \end{pmatrix}$$

$$\begin{vmatrix}
-9 & 3 & -6 & -6 \\
-7 & 3 & 7 & -4 \\
0 & 9 & 9 & -4 \\
-5 & 5 & -8 & 6
\end{vmatrix}$$

$$\begin{vmatrix}
-5 & 0 \\
2 & -3
\end{vmatrix}$$

$$\left( \begin{array}{ccc|ccc|c} 9 & 3 & -4 & -4 & -2 & 7 \\ -6 & -2 & -2 & 1 & -1 & -2 \end{array} \right) \left( \begin{array}{ccc|ccc|c} 28 & 19 & -27 & 52 & -61 & -62 \\ 53 & 58 & 94 & 13 & -62 & -62 \end{array} \right)$$

$$\begin{vmatrix}
27 & 53 & 87 & -64 \\
21 & -56 & 67 & 2 \\
82 & -36 & -14 & 37 \\
68 & -54 & 51 & -42
\end{vmatrix}$$

$$\begin{pmatrix}
3 & -8 \\
-8 & 0
\end{pmatrix}$$

$$\left(\begin{array}{cc|c}
2 & 8 & -4 & 6 \\
-7 & 2 & 1 & -1
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-7 & 4 \\
-8 & -1 \\
-4 & 9
\end{array}\right)$$

$$\left| \begin{array}{ccc|c}
5 & -2 \\
6 & -3
\end{array} \right| \qquad \left( \begin{array}{ccc|c}
-3 & 4 & -3 & 8 & -1 & -2 \\
-9 & 5 & -5 & -1 & 3 & -1 \\
9 & -2 & -3 & -8 & -9 & -7
\end{array} \right)$$

$$\begin{pmatrix} -66 & 77 & 72 & -91 & 29 & | & -24 \\ -84 & -36 & 29 & -78 & -35 & | & 37 \\ -53 & 75 & 14 & 26 & -92 & | & -86 \\ 22 & -65 & 5 & 79 & 18 & | & -11 \end{pmatrix} \begin{pmatrix} -96 & 57 & 40 & -94 \\ -93 & 11 & 79 & -16 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-7 & 5 & 4 & 2 & 9 & 1 \\
-4 & -3 & -9 & 6 & -2 & 0
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
6 & 3 \\
-8 & 9 \\
7 & -2 \\
1 & 4
\end{array}\right)$$

$$\begin{vmatrix}
-46 & -53 & 5 \\
40 & 59 & -15 \\
91 & -71 & 99
\end{vmatrix}$$

$$\begin{pmatrix}
-3 & 8 & 3 & 7 \\
-2 & 4 & 8 & -7
\end{pmatrix}$$

$$\left(\begin{array}{cc|c} -8 & 3 & -2 \\ 8 & 1 & 4 \end{array}\right) \qquad \left|\begin{array}{cc|c} -7 & 2 \\ 1 & 4 \end{array}\right|$$

$$\begin{pmatrix}
-7 & 7 & 8 & 3 \\
1 & -7 & 4 & 7 \\
9 & -2 & -5 & 6
\end{pmatrix}$$

$$\begin{pmatrix}
-45 & 69 \\
-74 & 12 \\
62 & -39 \\
-83 & -85
\end{pmatrix}$$

$$\begin{pmatrix} -19 & -66 & -51 & -99 & 50 \\ 0 & -18 & 4 & 42 & 78 \\ -47 & 67 & -81 & 70 & 33 \end{pmatrix} \begin{pmatrix} -42 & 91 & -99 \\ 41 & 54 & 38 \\ 89 & 10 & 1 \end{pmatrix}$$

$$\left( \begin{array}{ccc|c} -1 & 1 & -4 & -3 \\ 7 & -9 & 3 & -7 \\ 6 & -3 & -2 & -6 \end{array} \right) \quad \left( \begin{array}{ccc|c} -1 & -4 & 6 & 7 & -9 \\ -6 & -5 & -3 & -1 & 3 \end{array} \right)$$

$$\begin{vmatrix}
8 & 3 & -9 & -3 \\
-4 & 7 & 6 & 0 \\
0 & -4 & 5 & -4 \\
7 & 7 & 8 & 2
\end{vmatrix}$$

$$\begin{vmatrix}
-6 & -1 & -6 \\
6 & -4 & -7 \\
-7 & 7 & -2
\end{vmatrix}$$

$$\left| \begin{array}{ccc|c}
-5 & 6 \\
8 & 4
\end{array} \right| 
\left( \begin{array}{ccc|c}
120 & 211 & 222 \\
301 & -711 & 484
\end{array} \right)$$

$$\begin{vmatrix}
-725 & -129 & 517 \\
771 & -507 & -166 \\
205 & 963 & 967
\end{vmatrix}
\qquad
\begin{pmatrix}
9 & 6 & 7 & 9 \\
6 & -3 & -4 & -7 \\
-2 & -6 & 3 & -8 \\
-2 & 5 & 4 & -9
\end{pmatrix}$$

$$\begin{pmatrix}
46 & 6 \\
73 & 62 \\
-62 & -72
\end{pmatrix}
\qquad
\begin{vmatrix}
-7 & -6 & 6 \\
1 & 1 & -9 \\
4 & 8 & 5
\end{vmatrix}$$

$$\begin{vmatrix}
-20 & 74 & 87 \\
54 & -92 & 29 \\
45 & -62 & -47
\end{vmatrix}$$

$$\begin{vmatrix}
3 & -6 & 5 & -4 \\
5 & -9 & -6 & -4 \\
0 & 9 & 6 & 8 \\
-2 & 4 & 4 & -3
\end{vmatrix}$$

$$\left| \begin{array}{cc|c}
-1 & 4 \\
2 & 4
\end{array} \right| 
\left( \begin{array}{cc|c}
-8 & -59 & -55 \\
93 & -23 & -77
\end{array} \right)$$

$$\begin{vmatrix} 58 & -2 & 10 & -22 \\ -93 & 27 & 82 & 1 \\ -43 & 48 & -41 & 55 \\ 94 & 80 & -95 & -91 \end{vmatrix} \qquad \begin{vmatrix} -3 & 1 & 3 \\ -9 & -7 & -5 \\ 2 & -8 & 3 \end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
8 & 3 & -7 & 9 \\
6 & -5 & -3 & 2 \\
-2 & -6 & -4 & 8
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-3 & -6 & -2 & 2 \\
9 & -7 & 9 & -4
\end{array}\right)$$

$$\left(\begin{array}{cc|c}
-1 & -7 & -6 \\
0 & -4 & 9
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-75 & -53 & -78 \\
66 & -7 & 22 \\
-62 & -1 & 83
\end{array}\right)$$

$$\begin{vmatrix}
1 & -2 & 3 & 4 \\
-6 & -3 & -9 & -5 \\
-8 & -5 & 3 & 8 \\
2 & 1 & 8 & 8
\end{vmatrix}$$

$$\begin{vmatrix}
4 & -7 & 1 \\
-4 & 3 & 9 \\
9 & -8 & 2
\end{vmatrix}$$

$$\begin{pmatrix}
805 & 762 \\
628 & 922
\end{pmatrix}
\qquad
\begin{pmatrix}
6 & -2 & -8 & -8 \\
-4 & 1 & -2 & 3 \\
4 & -9 & -7 & -9 \\
3 & -9 & 4 & 3
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-2 & -5 & 8 & -8 \\
0 & 8 & 0 & 2
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-7 & -81 & -89 \\
47 & 64 & -97
\end{array}\right)$$

$$\left(\begin{array}{cc|c}
81 & -61 & -98 & 81 \\
77 & -63 & 92 & -79
\end{array}\right) \qquad \left|\begin{array}{cc|c}
5 & 2 \\
6 & 8
\end{array}\right|$$

$$\begin{pmatrix} 40 & 57 & -95 & -21 & -6 \\ -90 & -35 & 30 & -82 & 83 \\ -63 & -41 & -23 & -24 & -95 \\ -14 & 1 & -27 & 81 & 70 \end{pmatrix} \begin{pmatrix} -5 & -8 & -3 & 4 & 1 \\ -5 & 6 & -7 & -4 & 4 \\ 9 & -6 & -4 & 5 & -2 \end{pmatrix}$$

$$\begin{pmatrix} -70 & -74 \\ 94 & 96 \\ -25 & -87 \\ -89 & 65 \end{pmatrix} \qquad \begin{pmatrix} 1 & -1 & -4 \\ 7 & 3 & 4 \\ 5 & 5 & 2 \end{pmatrix}$$

$$\begin{vmatrix}
-8 & -2 \\
9 & 2
\end{vmatrix}$$

$$\begin{vmatrix}
-3 & -42 & -23 & 72 \\
-36 & 32 & -84 & 93 \\
-60 & -64 & 41 & 33 \\
38 & -88 & -16 & -47
\end{vmatrix}$$

$$\begin{vmatrix}
68 & -14 \\
23 & -77
\end{vmatrix}
\qquad \qquad \begin{pmatrix}
9 & -2 & | 5 \\
9 & -9 & | 6
\end{pmatrix}$$

$$\begin{pmatrix} 402 & -534 & -236 \\ 137 & -47 & 932 \\ -785 & 26 & 206 \\ 837 & -279 & 392 \end{pmatrix} \qquad \begin{pmatrix} 5 & 34 & 46 & 77 \\ -65 & 65 & 24 & 14 \\ -94 & -64 & 37 & 8 \end{pmatrix}$$

$$\begin{pmatrix}
-70 & -48 & | & -43 \\
72 & -86 & | & 73
\end{pmatrix}$$

$$\begin{pmatrix}
-18 & 10 \\
50 & 20 \\
-96 & -74 \\
-93 & -3 \\
-91 & 35
\end{pmatrix}$$

$$\begin{pmatrix}
6 & 42 & -92 & 99 & | & -22 \\
24 & 1 & -65 & 38 & | & -83 \\
-94 & 61 & 44 & -63 & | & -70
\end{pmatrix}
\begin{pmatrix}
7 & -48 & 1 \\
-61 & 33 & 52 \\
-21 & -75 & 79 \\
46 & 99 & 57
\end{pmatrix}$$

$$\begin{vmatrix}
-9 & 9 & -6 \\
5 & 2 & -5 \\
3 & 2 & 6
\end{vmatrix}$$

$$\begin{pmatrix}
-7 & 1 \\
-1 & 4 \\
9 & -7 \\
-9 & -3 \\
3 & -2
\end{pmatrix}$$

$$\begin{vmatrix}
 866 & 747 \\
 577 & -519
 \end{vmatrix}
 \qquad \begin{pmatrix}
 -30 & 6 & | & 42 \\
 77 & 11 & | & -58
 \end{pmatrix}$$

$$\begin{vmatrix}
-8 & -7 & -2 & 4 \\
-3 & 6 & -8 & 7 \\
0 & 6 & -9 & 4 \\
-9 & 5 & 5 & 2
\end{vmatrix}$$

$$\begin{pmatrix}
8 & 8 & | & -3 \\
-1 & 2 & | & 2
\end{pmatrix}$$

$$\begin{vmatrix}
 42 & -44 \\
 -64 & -82
 \end{vmatrix}
 \begin{vmatrix}
 -2 & 3 \\
 -1 & -3
 \end{vmatrix}$$

$$\begin{vmatrix}
97 & 82 \\
-13 & -20
\end{vmatrix}$$

$$\begin{pmatrix}
-43 & -21 & 61 & -94 \\
-67 & 99 & -35 & -89 \\
94 & -23 & 13 & -54 \\
-76 & 59 & -15 & -97
\end{pmatrix}$$

$$\begin{pmatrix} -6 & 4 \\ -1 & -1 \\ -3 & 6 \\ -7 & 8 \end{pmatrix} \qquad \begin{pmatrix} 3 & 1 & 3 \\ 1 & 0 & -6 \end{pmatrix}$$

$$\begin{pmatrix} 94 & -538 \\ -257 & 744 \\ -206 & -854 \\ -344 & 375 \\ 425 & 534 \end{pmatrix} \qquad \begin{pmatrix} -8 & 8 & -6 \\ 9 & -6 & 1 \\ 5 & -4 & 3 \end{pmatrix}$$

$$\begin{vmatrix}
-48 & -3 & 49 \\
-71 & 54 & -71 \\
-54 & 61 & 40
\end{vmatrix} \qquad \begin{pmatrix}
1 & 0 & 8 & 8 & 9 & 2 \\
-7 & -1 & 4 & -2 & -3 & 4
\end{pmatrix}$$

$$\begin{pmatrix}
-2 & -2 & 6 & 4 & -4 \\
3 & 2 & 8 & -2 & 1
\end{pmatrix}$$

$$\begin{pmatrix}
0 & 3 \\
7 & 3 \\
-4 & -4 \\
-7 & 7 \\
-4 & -5
\end{pmatrix}$$

$$\begin{bmatrix} 8 & -2 \\ 8 & -6 \end{bmatrix}$$
  $\begin{pmatrix} 7 & 0 & 8 & 4 \\ -2 & -6 & -9 & 4 \end{pmatrix}$ 

$$\begin{vmatrix}
-28 & -27 & 79 & 99 \\
-67 & 23 & 20 & -20 \\
87 & 1 & -22 & -88 \\
34 & -95 & -49 & 8
\end{vmatrix}$$

$$\begin{pmatrix}
-33 & -80 \\
52 & 37
\end{pmatrix}$$

$$\begin{pmatrix}
30 & -13 & -43 & 97 & 94 & | & -62 \\
75 & 94 & -46 & -31 & 39 & | & 8 \\
-64 & 3 & 96 & -30 & -38 & | & -29 \\
-15 & 16 & 22 & 84 & 30 & | & -40
\end{pmatrix}
\begin{vmatrix}
-98 & -17 & -8 \\
7 & 65 & -40 \\
-87 & 14 & -11
\end{vmatrix}$$

$$\begin{pmatrix}
-6 & -9 & 6 & 0 & -8 \\
-6 & -6 & 8 & -7 & 2 \\
6 & -9 & 7 & -4 & -7 \\
-2 & 1 & -7 & -9 & -2
\end{pmatrix}
\begin{pmatrix}
-61 & 29 & 43 & 52 & 28 \\
93 & -6 & 1 & 89 & -38 \\
-54 & 63 & 16 & -72 & 43
\end{pmatrix}$$

$$\begin{pmatrix}
-81 & -51 & 24 & | & 74 \\
72 & 97 & 36 & | & 60
\end{pmatrix}$$

$$\begin{pmatrix}
5 & -2 \\
6 & -5 \\
-4 & 8
\end{pmatrix}$$

$$\begin{vmatrix}
37 & -4 & 24 \\
-21 & -40 & -77 \\
-7 & -61 & 95
\end{vmatrix}$$

$$\begin{vmatrix}
3 & 0 & -1 & 3 \\
9 & 4 & 6 & 7 \\
3 & 4 & -7 & 3 \\
-6 & -5 & 7 & 6
\end{vmatrix}$$

$$\begin{vmatrix}
8 & -3 \\
-7 & -3
\end{vmatrix}
\qquad
\begin{pmatrix}
-5 & 0 & -8 & 6 & -8 \\
7 & 0 & -2 & 2 & -6 \\
2 & -8 & -6 & -2 & 3 \\
-7 & -4 & 1 & -9 & 6
\end{pmatrix}$$

$$\begin{pmatrix} -306 & -696 & 826 & -28 \\ 357 & 307 & -638 & -913 \\ 473 & -599 & -766 & -242 \end{pmatrix} \quad \begin{pmatrix} -6 & 7 & 2 \\ 9 & -3 & -9 \end{pmatrix}$$

$$\left(\begin{array}{cccc}
3 & 5 & -9 & -3 \\
8 & -4 & 4 & -4
\end{array}\right) \qquad \left|\begin{array}{cccc}
93 & 60 \\
40 & -23
\end{array}\right|$$

$$\begin{pmatrix}
2 & 3 & -9 & -8 \\
-6 & 7 & -9 & 8
\end{pmatrix}$$

$$\begin{vmatrix}
-98 & -55 & -3 & -18 \\
-73 & -18 & 45 & 9 \\
-17 & 81 & -84 & -30 \\
-3 & 37 & -62 & -22
\end{vmatrix}$$

$$\begin{pmatrix}
-5 & -5 & | & -9 \\
8 & -4 & | & -3
\end{pmatrix}$$

$$\begin{pmatrix}
-47 & -46 & -6 \\
79 & -7 & 75 \\
1 & 58 & 80 \\
36 & -46 & 23 \\
50 & -77 & 18
\end{pmatrix}$$

$$\begin{vmatrix} 670 & -805 & 716 \\ -275 & -368 & 697 \\ -76 & 848 & -275 \end{vmatrix} \begin{vmatrix} 27 & -74 & -48 & -79 \\ -63 & 83 & -39 & 13 \\ 92 & 98 & -97 & -19 \\ -63 & 73 & -33 & -47 \end{vmatrix}$$

$$\begin{vmatrix}
86 & -22 & -11 & 82 \\
38 & 11 & -97 & 52 \\
25 & -32 & -66 & -99 \\
-67 & -72 & -22 & 39
\end{vmatrix}$$

$$\begin{pmatrix}
0 & 7 & 6 & -3 \\
3 & 2 & 0 & 3
\end{pmatrix}$$

$$\begin{pmatrix} -24 & 57 & 8 & 96 \\ -29 & -9 & -12 & 48 \\ -37 & -53 & -72 & -73 \end{pmatrix} \qquad \begin{pmatrix} -9 & -8 & -8 \\ 3 & -1 & 8 \\ -2 & 4 & 8 \end{pmatrix}$$

$$\begin{pmatrix}
1 & 5 & 8 \\
-4 & 0 & -6
\end{pmatrix} \qquad \qquad \begin{pmatrix}
-5 & 2 \\
2 & -8 \\
-8 & 8
\end{pmatrix}$$

$$\begin{vmatrix}
-733 & -51 & -672 \\
789 & 309 & -962 \\
502 & -174 & -805
\end{vmatrix}
\qquad
\begin{pmatrix}
6 & 0 & 9 & 3 \\
-7 & -8 & -1 & 8 \\
4 & 1 & 7 & 8
\end{pmatrix}$$

$$\left(\begin{array}{ccccc} 8 & 1 & 6 & -6 & 6 \\ 2 & -2 & 7 & -2 & -1 \\ 3 & -2 & 2 & -6 & -1 \end{array}\right) \, \left(\begin{array}{cccccc} -66 & -38 & -97 & 90 & | & -89 \\ -30 & -28 & -9 & 84 & | & -85 \end{array}\right)$$

$$\left(\begin{array}{ccc|c}
96 & 36 & 71 & -70 \\
69 & 61 & -44 & 16
\end{array}\right)
\left(\begin{array}{ccc|c}
-9 & -1 & 0 & 1 & 9 & -6 \\
6 & -7 & -5 & -8 & 2 & -9 \\
5 & -2 & -3 & 3 & 5 & -9
\end{array}\right)$$

$$\begin{vmatrix}
 69 & 15 & 58 \\
 86 & -56 & -80 \\
 61 & 86 & -65
 \end{vmatrix}$$

$$\begin{pmatrix}
 9 & 6 & -8 \\
 5 & 0 & -1 \\
 6 & 2 & 5
 \end{pmatrix}$$

$$\begin{pmatrix} -9 & -7 & 8 \\ 1 & -7 & 9 \\ -6 & 1 & -3 \end{pmatrix} \qquad \begin{pmatrix} -324 & -943 \\ 120 & -311 \end{pmatrix}$$

$$\begin{pmatrix} -73 & -59 & -43 \\ -60 & 28 & -33 \end{pmatrix} \begin{pmatrix} -96 & -12 & -62 & 53 & 88 & 90 \\ 82 & 67 & 23 & 99 & -16 & 45 \\ -72 & -74 & -81 & -50 & -97 & -59 \\ 72 & -82 & -83 & 83 & 61 & -67 \end{pmatrix}$$

$$\begin{pmatrix} -8 & -8 & 5 & 9 \\ -6 & -5 & 8 & 5 \end{pmatrix} \begin{pmatrix} 740 & 136 & -720 & -776 & -810 \\ -149 & -857 & 353 & -329 & 339 \\ 317 & 613 & 227 & -140 & -456 \\ -70 & 607 & -682 & -890 & -645 \end{pmatrix}$$

$$\begin{pmatrix} 4 & 0 \\ -4 & -8 \\ -5 & -7 \\ -5 & -9 \end{pmatrix} \qquad \begin{pmatrix} 5 & 1 \\ 8 & 9 \\ 3 & 4 \\ -1 & -3 \end{pmatrix}$$

$$\left(\begin{array}{ccccc}
-1 & -9 & 6 & 6 & -7 \\
5 & -6 & 3 & 0 & -6
\end{array}\right) 
\qquad \left(\begin{array}{cccc}
76 & 83 \\
32 & 71
\end{array}\right)$$

$$\begin{pmatrix} -381 & 181 \\ 309 & 752 \\ -362 & 230 \end{pmatrix} \qquad \begin{vmatrix} -19 & -3 \\ -78 & -32 \end{vmatrix}$$

$$\left(\begin{array}{cc|c}
0 & -22 & 79 \\
-57 & 40 & 61
\end{array}\right) \qquad \left|\begin{array}{cc|c}
-5 & -1 \\
-6 & 3
\end{array}\right|$$

$$\begin{bmatrix}
870 & 652 \\
978 & 763
\end{bmatrix}
\qquad
\begin{pmatrix}
4 & 1 \\
20 & -34
\end{pmatrix}$$

$$\begin{vmatrix}
-27 & -48 \\
-67 & 80
\end{vmatrix}$$

$$\begin{vmatrix}
86 & 21 & 94 \\
77 & 76 & 41 \\
73 & -69 & 95
\end{vmatrix}$$

$$\begin{pmatrix}
-8 & -4 & -1 & 2 & 3 & 2 \\
-6 & -9 & -1 & 9 & 7 & 7 \\
2 & -8 & 7 & -4 & -6 & -1
\end{pmatrix}$$

$$\begin{pmatrix}
-3 & 5 \\
-6 & 9
\end{pmatrix}$$

$$\begin{pmatrix} -5 & 5 & -7 \\ -7 & -3 & 1 \\ -2 & 6 & -8 \end{pmatrix} \qquad \begin{pmatrix} 9 & -7 & -5 \\ 6 & 2 & 9 \end{pmatrix}$$

$$\begin{pmatrix} -1 & 5 & -2 \\ 1 & 4 & -2 \\ 7 & -9 & -7 \end{pmatrix} \qquad \begin{pmatrix} -71 & 43 & -93 & 55 \\ 80 & 78 & 37 & -49 \\ -5 & -22 & 66 & -51 \end{pmatrix}$$

$$\begin{pmatrix}
44 & -74 & -27 & 47 & | & 12 \\
-40 & 13 & 43 & -12 & | & 44 \\
-50 & -84 & -10 & 0 & | & 12 \\
-7 & 15 & -8 & -88 & | & -86
\end{pmatrix}
\begin{vmatrix}
-3 & -9 & 9 \\
9 & -6 & -2 \\
4 & -6 & -8
\end{vmatrix}$$

$$\begin{pmatrix} -62 & 92 & 0 & 43 \\ -45 & -74 & -39 & -20 \\ -62 & 45 & 5 & -65 \\ -8 & -78 & 22 & -80 \end{pmatrix} \begin{pmatrix} 61 & 377 & 620 & -928 & -192 \\ -135 & 368 & 596 & -127 & 70 \\ -614 & -260 & -900 & -959 & 292 \\ -915 & -242 & 773 & -607 & 907 \\ 518 & -974 & -977 & 987 & 662 \end{pmatrix}$$

$$\begin{pmatrix} 55 & -82 & -16 & 7 & -27 & | & -17 \\ 75 & -18 & 7 & -15 & 81 & | & 88 \\ -62 & -10 & -87 & 23 & -69 & | & 74 \end{pmatrix} \begin{pmatrix} -42 & -29 & -25 & -61 \\ 75 & -11 & 79 & -26 \\ -22 & -87 & -26 & -46 \\ 19 & 40 & 98 & -86 \end{pmatrix}$$

$$\begin{pmatrix} 11 & -64 & -93 & 1 \\ 59 & 27 & 93 & -15 \\ -26 & -82 & -33 & -73 \end{pmatrix} \qquad \begin{pmatrix} 54 & 55 & -46 \\ 86 & -33 & -37 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c} 4 & 1 & 5 & 7 & -1 \\ -2 & 3 & -3 & 1 & 6 \end{array}\right) \qquad \left|\begin{array}{ccc|c} -2 & 5 \\ -8 & 0 \end{array}\right|$$

$$\begin{pmatrix} -2 & 4 & -3 & 6 & 0 & 2 \\ 9 & -8 & 6 & 8 & -9 & 1 \end{pmatrix} \begin{pmatrix} 70 & -44 & -32 & -41 & -17 \\ -53 & -40 & 72 & 86 & 19 \end{pmatrix}$$

$$\begin{pmatrix}
0 & -7 & 7 \\
6 & 6 & 9 \\
-8 & 9 & 2
\end{pmatrix} \qquad \qquad \begin{pmatrix}
-9 & -5 & -4 & 9 & 8 \\
1 & 2 & 3 & 5 & 6
\end{pmatrix}$$

$$\begin{pmatrix}
-8 & 8 & -5 & -3 \\
-4 & 3 & -1 & -4 \\
-8 & 3 & -4 & 4 \\
-8 & -7 & 0 & -1
\end{pmatrix}$$

$$\begin{vmatrix}
73 & -11 \\
51 & 89
\end{vmatrix}$$

$$\begin{pmatrix}
21 & -2 & 89 & 36 & 68 \\
-43 & 77 & -43 & 35 & 65 \\
-72 & 32 & -44 & 6 & -9 \\
-46 & -87 & 92 & 85 & -82
\end{pmatrix}
\begin{vmatrix}
-96 & -59 & -94 & 34 \\
8 & -34 & 74 & 81 \\
-81 & 11 & 68 & 7 \\
60 & 11 & 9 & 4
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
0 & 1 & -5 \\
1 & 2 & 6
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
5 & 7 & 4 & 0 & 7 \\
-9 & 5 & -5 & -8 & 4 \\
1 & -3 & -4 & 5 & 1
\end{array}\right)$$

$$\begin{pmatrix}
-85 & -670 \\
-979 & -213 \\
687 & 357
\end{pmatrix}$$

$$\begin{vmatrix}
-7 & 2 & -2 & 8 \\
-4 & 1 & -1 & -1 \\
-6 & -8 & -1 & -7 \\
6 & 4 & -7 & 0
\end{vmatrix}$$

$$\begin{pmatrix}
6 & 3 \\
1 & 8 \\
-9 & -1 \\
6 & 4 \\
2 & 6
\end{pmatrix}$$

$$\begin{vmatrix}
1 & -6 \\
-5 & 9
\end{vmatrix}$$

$$\begin{pmatrix} 284 & 672 & 316 & -880 & 201 & 30 \\ -8 & -103 & 8 & -77 & 977 & -459 \\ -379 & 974 & 490 & 668 & -53 & 336 \\ 736 & 447 & 294 & -264 & -650 & 709 \\ -752 & -592 & -62 & -814 & 165 & 741 \end{pmatrix} \begin{vmatrix} 0 & -3 & 5 & 0 \\ -1 & -1 & -6 & -1 \\ 4 & 5 & -3 & -66 \\ -8 & 4 & -4 & 2 \end{vmatrix}$$

$$\begin{vmatrix}
 2 & 1 & -2 \\
 5 & -2 & -7 \\
 -2 & 4 & 1
 \end{vmatrix}
 = 
 \begin{pmatrix}
 -83 & -14 & 94 \\
 55 & -49 & 80
 \end{pmatrix}$$

$$\begin{pmatrix}
1 & 4 & -7 & 6 & | & -2 \\
2 & 7 & 9 & -9 & | & 9 \\
-8 & 3 & -6 & 8 & | & 2 \\
2 & 4 & 0 & 8 & | & 9
\end{pmatrix}$$

$$\begin{pmatrix}
-4 & 0 \\
-55 & 35
\end{pmatrix}$$

$$\begin{pmatrix} 244 & 717 & 381 & -139 & 330 & 679 \\ -274 & -692 & -728 & -52 & 917 & -785 \\ 267 & 954 & 341 & 117 & 341 & 704 \\ 17 & 190 & -106 & -753 & -224 & 378 \end{pmatrix} \begin{pmatrix} 8 & 6 \\ 1 & 3 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
8 & -1 & -9 & -7 \\
-9 & 8 & 9 & -7
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
-33 & -8 & -77 \\
-49 & 86 & 89 \\
-9 & 31 & -48
\end{array}\right|$$

$$\begin{pmatrix} -81 & 83 & 72 \\ -47 & 63 & -64 \\ 48 & -1 & 33 \end{pmatrix} \begin{pmatrix} 38 & -70 & 56 & -72 & 2 & | & -38 \\ -13 & -78 & -74 & -17 & 88 & | & 13 \\ -39 & -17 & -69 & 2 & 78 & | & -60 \end{pmatrix}$$

$$\begin{pmatrix} -407 & 715 & | & -595 \\ 950 & -232 & | & 816 \end{pmatrix} \qquad \begin{pmatrix} -2 & -39 & 71 \\ -91 & 42 & -84 \end{pmatrix}$$

$$\begin{pmatrix} -2 & 7 & -2 \\ -3 & 6 & 8 \\ -1 & -8 & -8 \\ -5 & -3 & -2 \end{pmatrix} \qquad \begin{pmatrix} -1 & 5 & 5 & | & -2 \\ -4 & -1 & -9 & | & -8 \end{pmatrix}$$

$$\begin{pmatrix}
42 & 47 & 44 \\
-98 & 14 & 99
\end{pmatrix}
\begin{vmatrix}
-8 & -8 & -3 & 1 \\
-2 & 6 & 4 & 0 \\
7 & -3 & -8 & -3 \\
-3 & -9 & -2 & -4
\end{vmatrix}$$

$$\begin{pmatrix} 1 & 9 & 4 & 1 & -4 & 6 \\ -7 & -2 & -1 & 6 & 0 & 4 \\ -4 & 3 & 4 & 8 & 7 & 8 \\ -1 & -4 & -7 & -8 & 1 & 7 \end{pmatrix} \begin{pmatrix} -5 & 97 & 92 & 6 & 43 & 21 \\ 85 & -68 & -69 & 17 & -61 & 81 \end{pmatrix}$$

$$\begin{pmatrix}
70 & -9 & -42 & -53 & | & -17 \\
23 & 88 & 50 & 61 & | & 63 \\
55 & -83 & -35 & 90 & | & 30 \\
89 & -86 & -47 & -94 & | & -13
\end{pmatrix}$$

$$\begin{pmatrix}
-8 & -8 & | & 0 \\
6 & 3 & | & 5
\end{pmatrix}$$

$$\begin{pmatrix}
-5 & 3 & -1 & 0 & 5 \\
-4 & -7 & -5 & 3 & -7 \\
-9 & -6 & -4 & 9 & 4
\end{pmatrix}$$

$$\begin{pmatrix}
6 & 2 \\
0 & 3
\end{pmatrix}$$

$$\begin{vmatrix}
6 & -2 \\
8 & 3
\end{vmatrix} \qquad
\begin{pmatrix}
93 & 56 & -78 & -55 & 73 \\
-20 & -75 & -82 & -70 & 87 \\
-36 & -78 & 46 & 23 & 49
\end{vmatrix} = -26$$

$$\begin{vmatrix}
-5 & 4 & -7 & -6 \\
-9 & -7 & 0 & -1 \\
8 & -1 & -3 & -4 \\
6 & 6 & 9 & 7
\end{vmatrix}$$

$$\begin{pmatrix}
9 & 2 & -3 & 7 \\
-8 & -6 & -1 & -7 \\
-2 & 5 & 8 & 7
\end{pmatrix}$$

$$\begin{pmatrix} -73 & 83 \\ 29 & 48 \\ 22 & 25 \\ -84 & 78 \end{pmatrix} \qquad \begin{pmatrix} 31 & 26 & -25 & 20 \\ 35 & -29 & -11 & -62 \\ -74 & -54 & 91 & 28 \end{pmatrix}$$

$$\begin{vmatrix}
0 & -1 & -9 \\
-9 & 2 & 6 \\
-5 & -4 & -1
\end{vmatrix}$$

$$\begin{pmatrix}
-5 & -9 & | & -9 \\
4 & 3 & | & 1
\end{pmatrix}$$

$$\left| \begin{array}{ccc}
6 & -4 \\
6 & 9
\end{array} \right| 
\left( \begin{array}{cccc}
-5 & -4 & 8 \\
-9 & -4 & 1
\end{array} \right)$$

$$\begin{pmatrix} -12 & -13 \\ -37 & -34 \\ -99 & -77 \end{pmatrix} \qquad \begin{pmatrix} -348 & -499 & -637 \\ 575 & 4 & -990 \\ -543 & -951 & -364 \\ 998 & -207 & -630 \end{pmatrix}$$

$$\begin{vmatrix}
-1 & 1 & -5 & -1 \\
1 & 5 & -1 & 2 \\
-5 & 1 & -3 & -3 \\
1 & 6 & 1 & 2
\end{vmatrix}$$

$$\begin{pmatrix}
7 & -2 & -7 & 3 & | & -7 \\
0 & -8 & 7 & 2 & | & 1
\end{pmatrix}$$

$$\begin{pmatrix} -35 & -98 & 68 \\ -82 & -68 & -52 \\ -33 & 66 & -42 \\ 24 & 23 & -35 \end{pmatrix} \qquad \begin{vmatrix} -51 & 7 & 99 \\ 8 & -91 & -64 \\ 79 & -69 & -24 \end{vmatrix}$$

$$\begin{vmatrix}
6 & 6 & 4 & 9 \\
6 & 8 & -2 & -8 \\
9 & 5 & 9 & 6 \\
9 & 4 & -8 & 5
\end{vmatrix}$$

$$\begin{pmatrix}
-79 & 5 \\
-21 & 45
\end{pmatrix}$$

$$\begin{vmatrix}
-23 & 77 \\
-35 & 79
\end{vmatrix}$$

$$\begin{vmatrix}
-398 & 951 & 438 \\
571 & 678 & -184 \\
-791 & 787 & -88
\end{vmatrix}$$

$$\begin{pmatrix}
1 & -7 & 1 & -1 & | & -4 \\
-2 & -3 & -7 & 8 & | & -9 \\
-5 & -2 & -1 & -9 & | & -6
\end{pmatrix}
\qquad
\begin{pmatrix}
-9 & 7 & 1 \\
6 & 8 & -7 \\
-1 & 3 & -4 \\
-1 & 7 & 2
\end{pmatrix}$$

$$\begin{pmatrix}
-3 & 8 \\
2 & -2 \\
2 & -4
\end{pmatrix} \qquad \begin{pmatrix}
58 & -98 & | & 49 \\
8 & 94 & | & -85
\end{pmatrix}$$

$$\begin{pmatrix}
-3 & 3 & -1 & | & -9 \\
0 & 1 & 6 & | & 5 \\
4 & 2 & 4 & | & 2
\end{pmatrix} \qquad \qquad \begin{pmatrix}
-55 & -46 & | & 28 \\
92 & -80 & | & -91
\end{pmatrix}$$

$$\begin{pmatrix} -41 & 40 \\ -45 & -60 \\ 39 & -97 \end{pmatrix} \qquad \begin{pmatrix} 84 & -12 & -27 & 35 \\ 36 & 4 & -92 & 54 \end{pmatrix}$$

$$\begin{vmatrix}
594 & 778 \\
979 & 112
\end{vmatrix}
\qquad \qquad \left(\begin{array}{cc|c}
-29 & 60 & 43 \\
-15 & 17 & 12
\end{array}\right)$$

$$\begin{pmatrix}
0 & 2 & 2 & 2 & 6 \\
-8 & -9 & 2 & 8 & 5 \\
-7 & -2 & -1 & 9 & -5 \\
-2 & 5 & 8 & 5 & -7
\end{pmatrix}$$

$$\begin{pmatrix}
-50 & -96 & 96 \\
-90 & -31 & 42
\end{pmatrix}$$

$$\left(\begin{array}{cccccc}
4 & 3 & -4 & 5 & 3 \\
-2 & 3 & -1 & 4 & 9 \\
0 & -9 & -9 & -2 & -7
\end{array}\right) \quad
\left(\begin{array}{cccccc}
2 & 3 & 8 & -1 \\
8 & 1 & 1 & 9 \\
0 & -3 & -2 & -5
\end{array}\right)$$

$$\begin{vmatrix}
-12 & -83 & -93 & 21 \\
-10 & 23 & -40 & -39 \\
99 & 61 & -50 & 65 \\
0 & -8 & 58 & 72
\end{vmatrix} \begin{pmatrix}
-16 & -7 & 86 & -52 & -99 \\
-62 & 94 & 38 & 42 & 58
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c} -45 & 49 & 23 & 98 & -49 \\ 80 & -66 & 55 & 26 & -84 \end{array}\right) \left(\begin{array}{ccc|c} 16 & -7 & 36 & 81 \\ 79 & -15 & -94 & -6 \\ -59 & -28 & 18 & -51 \end{array}\right)$$

$$\begin{vmatrix}
-43 & -15 \\
-33 & 59
\end{vmatrix}
= \begin{pmatrix}
780 & -567 & -518 \\
-183 & -765 & 758 \\
-858 & 194 & -691 \\
-241 & -797 & 396
\end{pmatrix}$$

$$\begin{pmatrix}
63 & -82 \\
-91 & 11
\end{pmatrix}
\begin{vmatrix}
8 & -6 & 2 & -8 \\
9 & 7 & 4 & 5 \\
2 & -7 & 0 & 8 \\
-3 & -7 & 8 & 9
\end{vmatrix}$$

$$\begin{vmatrix} 27 & 38 & -31 & -34 \\ -69 & -29 & 76 & -85 \\ 11 & -52 & -5 & 32 \\ 54 & 89 & -32 & 87 \end{vmatrix} \begin{vmatrix} 70 & 17 & -30 & -83 \\ 52 & -5 & 20 & 26 \\ -81 & 15 & 33 & 53 \\ -73 & 37 & -78 & 80 \end{vmatrix}$$

$$\begin{pmatrix}
-6 & -4 & -5 \\
-1 & 3 & 2 \\
-8 & -2 & 6
\end{pmatrix}$$

$$\begin{vmatrix}
9 & -9 & -1 & 3 \\
0 & 2 & 0 & 1 \\
-4 & 7 & 3 & -2 \\
8 & 6 & 7 & -5
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
8 & -8 & -2 & 5 & 6 \\
-8 & 3 & 3 & -6 & -1
\end{array}\right)
\left(\begin{array}{ccc|c}
5 & -7 & 6 & -4 & -5 \\
5 & 8 & 5 & 4 & 1 \\
7 & -1 & -5 & 8 & 4 \\
-9 & 7 & 5 & -5 & -5
\end{array}\right)$$

$$\begin{pmatrix} 1 & 6 & -8 & -3 & | & -8 \\ -9 & 9 & -8 & 4 & | & 1 \\ 4 & -1 & -3 & -3 & | & -7 \\ -3 & -4 & -4 & -2 & | & -3 \end{pmatrix} \begin{pmatrix} -36 & 10 & -95 & -80 & -60 & | & -76 \\ 59 & -36 & -99 & -73 & 80 & | & -76 \end{pmatrix}$$

$$\begin{pmatrix} -863 & 9 & -711 & -392 \\ -326 & -896 & 589 & -783 \end{pmatrix} \qquad \begin{pmatrix} -46 & 15 \\ 65 & 72 \end{pmatrix}$$

$$\begin{vmatrix}
275 & 860 \\
143 & -189
\end{vmatrix} \qquad \qquad \begin{pmatrix}
-8 & -2 \\
-6 & 4
\end{pmatrix}$$

$$\begin{pmatrix}
-788 & 554 & | & -505 \\
-396 & 115 & | & -278
\end{pmatrix}$$

$$\begin{pmatrix}
8 & -8 & -8 \\
4 & -3 & -9 \\
-1 & 7 & 7 \\
7 & -1 & -7 \\
-3 & 2 & -1
\end{pmatrix}$$

$$\left(\begin{array}{cc|c}
73 & 98 & -14 \\
-44 & 26 & 89
\end{array}\right) \qquad \left|\begin{array}{cc|c}
-15 & 80 \\
-51 & -37
\end{array}\right|$$

$$\begin{pmatrix} -3 & -4 \\ -6 & -4 \end{pmatrix} \qquad \begin{pmatrix} 1 & -2 \\ -1 & 3 \\ 1 & 8 \\ 9 & 4 \\ 4 & -7 \end{pmatrix}$$

$$\begin{pmatrix}
73 & 33 & 41 & 79 & | & -55 \\
-66 & 27 & -28 & -15 & | & 47 \\
21 & 20 & 2 & 47 & | & -73 \\
92 & 29 & 70 & 32 & | & 53
\end{pmatrix}
\qquad
\begin{pmatrix}
-1 & 4 & 3 \\
9 & 7 & -1
\end{pmatrix}$$

$$\left(\begin{array}{ccc}
-3 & -2 \\
9 & 1
\end{array}\right) \qquad \left|\begin{array}{cccc}
-1 & 9 & 8 \\
-9 & 7 & 9 \\
9 & 3 & -5
\end{array}\right|$$

$$\begin{pmatrix}
-79 & 39 & 25 & -48 & -19 \\
-22 & -88 & 82 & -64 & -63 \\
86 & 86 & 96 & 3 & 17
\end{pmatrix}$$

$$\begin{vmatrix}
-1 & 5 \\
-3 & -6
\end{vmatrix}$$

$$\left(\begin{array}{cc|cc} 4 & -5 & -7 & -2 \\ -3 & -1 & 4 & -6 \end{array}\right) \qquad \left|\begin{array}{cc|cc} -683 & 74 & 341 \\ -895 & 797 & -90 \\ 393 & 946 & 569 \end{array}\right|$$

$$\begin{pmatrix} -75 & -50 \\ 45 & -81 \\ 38 & -78 \\ 34 & 40 \end{pmatrix} \qquad \begin{vmatrix} -25 & 58 \\ -30 & 81 \end{vmatrix}$$

$$\begin{pmatrix} -54 & 17 & 64 & 83 \\ 56 & -52 & -27 & -89 \end{pmatrix} \begin{pmatrix} 84 & -64 & -48 & -40 & 2 & -4 \\ 35 & 45 & -9 & 94 & -9 & -41 \\ 44 & -89 & -88 & 28 & -15 & 36 \\ 67 & 21 & 32 & -2 & -24 & 58 \\ -15 & -65 & -12 & -24 & -87 & -91 \end{pmatrix}$$

$$\begin{pmatrix}
9 & 3 & -2 \\
6 & 4 & -2 \\
0 & -5 & -4
\end{pmatrix}
\qquad
\begin{pmatrix}
-1 & -7 & 0 & 1 \\
-9 & -9 & 1 & -8
\end{pmatrix}$$

$$\left(\begin{array}{ccc}
1 & 8 & 7 \\
-1 & 1 & 3
\end{array}\right) \qquad \left(\begin{array}{cccc}
5 & 2 & -6 & -9 \\
1 & 8 & 4 & 5
\end{array}\right)$$

$$\begin{vmatrix}
-82 & -57 \\
-61 & 64
\end{vmatrix}
\qquad \qquad \left(\begin{array}{cc|c}
5 & 0 & 6 \\
-7 & 4 & 2
\end{array}\right)$$

$$\left(\begin{array}{cccc}
-4 & 6 & 8 & -3 \\
5 & 5 & 3 & 8
\end{array}\right) \qquad \left|\begin{array}{ccccc}
4 & -4 & -7 \\
-3 & 6 & 6 \\
7 & -3 & 1
\end{array}\right|$$

$$\begin{pmatrix} 27 & 12 & 48 & -90 & -76 \\ 35 & 39 & 25 & -28 & 4 \\ 83 & 0 & 2 & 78 & -84 \\ 35 & 17 & -98 & 99 & -31 \\ 25 & 59 & -16 & -73 & 24 \end{pmatrix} \qquad \begin{pmatrix} 1 & -6 \\ -8 & 1 \\ -1 & -9 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c} -9 & -3 & 2 & 7 & 3 & 4 \\ 7 & -5 & -2 & 5 & -3 & 2 \end{array}\right) \qquad \left|\begin{array}{ccc|c} -39 & -71 & \\ -29 & 31 & \end{array}\right|$$

$$\begin{pmatrix}
-3 & 9 \\
9 & 3 \\
6 & -8
\end{pmatrix}
\qquad
\begin{pmatrix}
4 & 2 & 8 & -7 \\
4 & 2 & -7 & -4 \\
5 & -7 & -5 & 8
\end{pmatrix}$$

$$\begin{pmatrix} -68 & 48 & 29 & 31 \\ 70 & 28 & -67 & 19 \\ 58 & 33 & 31 & 63 \\ 71 & 66 & 50 & -21 \\ 58 & -38 & -20 & 83 \end{pmatrix} \begin{pmatrix} -960 & -749 & -362 & 773 \\ 242 & 697 & 37 & -799 \\ -35 & 530 & -415 & 788 \end{pmatrix}$$

$$\left(\begin{array}{cc|c} 2 & 5 & 4 \\ 1 & 0 & 2 \end{array}\right) \qquad \left(\begin{array}{cc|c} 50 & 84 \\ 82 & 24 \end{array}\right)$$

$$\begin{pmatrix} 66 & -18 & -39 & 24 \\ -65 & 31 & 24 & 61 \\ 32 & -54 & -21 & 68 \\ 87 & -55 & 66 & -12 \end{pmatrix} \begin{pmatrix} -4 & -6 & -4 & 6 & 3 & -5 \\ 2 & -7 & -4 & -2 & -8 & 9 \end{pmatrix}$$

$$\begin{pmatrix}
7 & 8 \\
-2 & 2 \\
-8 & 2 \\
0 & -9 \\
8 & 9
\end{pmatrix}$$

$$\begin{pmatrix}
54 & 45 \\
-25 & -60 \\
-12 & 16
\end{pmatrix}$$

$$\begin{pmatrix}
91 & 86 & -41 & | & -8 \\
-60 & -13 & -68 & | & -63 \\
91 & -8 & 78 & | & 41
\end{pmatrix}
\begin{pmatrix}
-7 & 7 & 6 & | & 4 \\
1 & -8 & 6 & | & 3 \\
6 & 9 & -4 & | & -5
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
9 & -3 & 0 \\
-1 & -7 & -9
\end{array}\right) \quad \left(\begin{array}{cccc|c}
-9 & 6 & 6 & 2 & -7 & -4 \\
-5 & 3 & 4 & -5 & -6 & -7 \\
3 & -2 & 9 & -1 & 0 & 5 \\
8 & 8 & 8 & -2 & -7 & 1 \\
1 & 1 & -9 & -3 & 4 & 3
\end{array}\right)$$

$$\left| \begin{array}{ccc}
161 & 295 \\
895 & -358
\end{array} \right| \qquad \left( \begin{array}{ccc}
3 & 6 \\
0 & 3 \\
-2 & -9
\end{array} \right)$$

$$\begin{pmatrix}
4 & 1 & 2 & 9 \\
6 & 2 & -5 & 6 \\
-5 & 8 & 1 & 9
\end{pmatrix} \qquad
\begin{pmatrix}
-4 & 0 & 2 & 4 \\
-3 & -4 & -3 & -6
\end{pmatrix}$$

$$\begin{pmatrix}
1 & -4 & -9 & -4 & | & -9 \\
-3 & 0 & -9 & 6 & | & 4 \\
-6 & 1 & 3 & 5 & | & -6
\end{pmatrix}$$

$$\begin{pmatrix}
0 & 7 & | & -9 \\
-4 & 2 & | & -4
\end{pmatrix}$$

$$\begin{pmatrix}
8 & 8 & 8 & 7 \\
-7 & -8 & -3 & 1 \\
-8 & -6 & 0 & -8
\end{pmatrix}$$

$$\begin{pmatrix} -8 & -9 & 3 & 6 & 4 \\ 2 & 6 & -8 & 5 & 5 \\ 4 & 2 & -6 & -9 & -3 \\ -3 & -2 & 2 & 4 & -4 \end{pmatrix} \begin{pmatrix} -32 & -62 & -94 & -73 \\ 94 & -89 & -59 & -96 \\ 39 & -11 & 32 & -5 \end{pmatrix}$$

$$\begin{pmatrix}
-11 & -5 & 58 & 25 \\
-10 & 68 & 58 & 52 \\
18 & 51 & 42 & 93
\end{pmatrix}$$

$$\begin{vmatrix}
0 & -9 & 5 \\
9 & 3 & 7 \\
-7 & 2 & 5
\end{vmatrix}$$

$$\begin{pmatrix}
42 & 8 & 51 & -70 & 78 & 19 \\
74 & -56 & -44 & -84 & -63 & 63 \\
54 & 26 & 99 & -91 & -55 & 18
\end{pmatrix}
\quad
\begin{vmatrix}
-6 & -9 \\
-9 & 8
\end{vmatrix}$$

$$\begin{pmatrix}
-4 & -9 & -5 & | & -5 \\
8 & 1 & 6 & | & -3 \\
-6 & -4 & 9 & | & -9
\end{pmatrix}
\qquad
\begin{pmatrix}
61 & -73 & -33 \\
-58 & 72 & -4 \\
27 & -40 & 17
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c} 8 & 3 & 3 & 8 \\ 0 & 7 & 1 & 5 \end{array}\right) \qquad \left(\begin{array}{cccc|c} -52 & 20 & -71 & -97 & -88 \\ -70 & -71 & -95 & 70 & 47 \end{array}\right)$$

$$\left(\begin{array}{ccc|c} 67 & 55 & -26 & 66 & 52 & 20 \\ -28 & 35 & -61 & 4 & 15 & -72 \end{array}\right) \left(\begin{array}{ccc|c} -1 & 4 & 7 & 5 \\ -1 & -4 & -8 & -1 \\ -1 & -3 & -2 & 3 \end{array}\right)$$

$$\begin{pmatrix}
-5 & -3 & 0 & | & -5 \\
1 & 5 & -9 & | & -8 \\
5 & -9 & -7 & | & 8
\end{pmatrix}$$

$$\begin{pmatrix}
93 & 65 \\
-51 & 36 \\
-92 & -64 \\
-96 & -55
\end{pmatrix}$$

$$\begin{pmatrix}
6 & 9 & -5 \\
-6 & 4 & -2
\end{pmatrix}$$

$$\begin{vmatrix}
-224 & -471 & -966 \\
70 & 729 & 785 \\
-204 & 908 & 901
\end{vmatrix}$$

$$\left(\begin{array}{cc|c}
-2 & 1 & -8 \\
-1 & 8 & 5
\end{array}\right) \qquad \left|\begin{array}{cc|c}
-75 & 13 & 28 \\
59 & -59 & 55 \\
-17 & -64 & -29
\end{array}\right|$$

$$\left( \begin{array}{cccc} 58 & -61 & -44 & 82 \\ -57 & 13 & 90 & -76 \end{array} \right) \qquad \left( \begin{array}{cccc} -40 & 36 & -59 \\ -70 & -74 & -24 \end{array} \right)$$

$$\left(\begin{array}{ccc|ccc|c}81 & -7 & -91 & -21 & 95 & 54\\-48 & -52 & 51 & 87 & -77 & -48\end{array}\right) \left(\begin{array}{ccc|c}16 & 46 & -31\\17 & 3 & -48\end{array}\right)$$

$$\begin{pmatrix} -5 & -5 \\ 1 & 7 \\ -6 & -8 \\ 3 & -4 \\ -9 & -1 \end{pmatrix} \qquad \begin{pmatrix} 5 & -2 & 4 & 8 \\ 1 & -4 & -3 & -3 \end{pmatrix}$$

$$\left| \begin{array}{cccc}
-1 & -1 \\
5 & -8
\end{array} \right| 
\left( \begin{array}{ccccc}
5 & -3 & -6 & -3 \\
2 & 4 & 2 & 3
\end{array} \right)$$

$$\left(\begin{array}{ccc|c}
-9 & 7 & 6 & -8 \\
1 & 3 & -8 & 5
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
7 & -6 \\
2 & 6 \\
-9 & 2 \\
2 & 5
\end{array}\right)$$

$$\begin{pmatrix}
-9 & 7 & 2 & -7 & -5 & | & -5 \\
-7 & -7 & 1 & -3 & 0 & | & -3
\end{pmatrix}
\begin{pmatrix}
-5 & 80 & -20 & -16 & | & 17 \\
4 & 88 & -56 & -83 & | & -12 \\
-17 & 66 & 48 & 44 & | & -99 \\
-33 & -57 & -17 & -58 & | & -6
\end{pmatrix}$$

$$\begin{pmatrix}
0 & -2 & -1 & -1 \\
-7 & -6 & 1 & 0 \\
2 & -5 & 4 & -2 \\
-7 & -9 & 9 & 4 \\
-9 & -9 & 3 & 1
\end{pmatrix}$$

$$\begin{pmatrix}
22 & 62 \\
60 & 53 \\
85 & 5 \\
-47 & -48 \\
-19 & 59
\end{pmatrix}$$

$$\begin{pmatrix} 6 & 4 \\ 3 & 9 \\ 7 & -7 \\ 8 & 3 \end{pmatrix} \qquad \begin{pmatrix} -5 & 4 & 3 & 6 & 9 \\ -2 & -8 & 6 & 1 & 1 \end{pmatrix}$$

$$\begin{vmatrix}
-2 & -2 & 5 & -7 \\
-1 & -3 & 6 & 9 \\
1 & -7 & -8 & 0 \\
-5 & 2 & 2 & 1
\end{vmatrix}$$

$$\begin{pmatrix}
0 & 88 & | & -71 \\
95 & -2 & | & 66
\end{pmatrix}$$

$$\begin{pmatrix} 91 & 50 & -38 & 57 & -93 \\ -94 & 86 & 78 & -13 & -52 \\ 99 & -7 & 28 & 20 & -5 \\ 91 & 19 & 63 & 81 & 32 \\ -54 & 87 & 48 & 35 & 20 \end{pmatrix} \begin{pmatrix} -3 & 3 & -3 & 2 & 2 \\ -1 & 2 & 4 & 5 & 3 \\ 1 & 2 & 4 & -9 & 6 \\ 8 & -1 & 3 & 0 & 8 \end{pmatrix}$$

$$\begin{pmatrix} -8 & 7 & 0 & -1 & | & -9 \\ 6 & 4 & -8 & -7 & | & 9 \\ 0 & -9 & 3 & -3 & | & 7 \\ -8 & -8 & 7 & -2 & | & 4 \end{pmatrix} \begin{pmatrix} -51 & -19 & 25 & | & 92 \\ 63 & -97 & -7 & | & 16 \\ -68 & 29 & 76 & | & 11 \end{pmatrix}$$

$$\begin{pmatrix} -84 & -12 & 15 & -22 & -44 & | & -3 \\ 38 & -99 & 65 & 1 & -12 & | & 18 \\ -78 & -57 & -62 & -66 & 28 & | & -54 \\ 1 & 31 & 4 & -11 & -62 & | & 15 \\ -20 & -66 & -19 & -9 & 12 & | & 63 \end{pmatrix} \begin{pmatrix} 67 & 25 & | & 75 \\ 75 & 65 & | & 1 \end{pmatrix}$$

$$\begin{pmatrix} 43 & 87 \\ 2 & -24 \\ 57 & 54 \end{pmatrix} \qquad \qquad \begin{pmatrix} -5 & 9 & 3 \\ 3 & 2 & -2 \end{pmatrix}$$

$$\begin{vmatrix} 82 & 24 & -16 \\ 68 & -79 & 67 \\ 49 & 36 & -72 \end{vmatrix} \qquad \begin{pmatrix} -2 & 1 & -3 & -1 & | & -4 \\ -7 & -6 & 0 & -5 & | & 3 \\ 6 & -8 & -3 & -1 & | & -1 \\ -3 & -2 & -4 & -8 & | & -5 \end{pmatrix}$$

$$\left(\begin{array}{cc|c}
9 & -4 & -1 \\
2 & -3 & -2
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-6 & -1 \\
-6 & -3
\end{array}\right)$$

$$\begin{pmatrix} -71 & -6 & 77 & -77 & -57 \\ -25 & -89 & -44 & 69 & -13 \\ 56 & -74 & -24 & 66 & 36 \\ 55 & -31 & -35 & 37 & -26 \end{pmatrix} \begin{pmatrix} -4 & 9 & 7 & 2 & 5 & 9 \\ 8 & 1 & 0 & -3 & -3 & 8 \\ -8 & -2 & 0 & -9 & -7 & 5 \\ 1 & -3 & -7 & 8 & 0 & -7 \end{pmatrix}$$

$$\begin{vmatrix} -9 & 0 & -9 & 8 \\ 2 & -7 & 7 & 1 \\ 1 & 7 & 6 & -8 \\ -6 & -5 & 8 & 6 \end{vmatrix} \begin{vmatrix} -653 & -914 & -386 & 282 \\ 624 & 679 & 682 & -528 \\ -555 & -651 & 122 & 461 \\ 138 & 349 & -6 & -142 \\ 85 & 261 & -656 & -168 \end{vmatrix}$$

$$\begin{vmatrix}
-12 & -42 & -82 \\
-89 & -42 & -50 \\
25 & -38 & -21
\end{vmatrix}
\qquad
\begin{pmatrix}
6 & -5 & -6 & | -8 \\
6 & 9 & -9 & | 0 \\
0 & 4 & 9 & | 0
\end{pmatrix}$$

$$\begin{vmatrix}
19 & 24 & 18 \\
-90 & 37 & 53 \\
9 & -57 & -99
\end{vmatrix}$$

$$\begin{pmatrix}
-4 & 0 \\
5 & 5 \\
5 & -6 \\
6 & 7
\end{pmatrix}$$

$$\left(\begin{array}{cccccc}
-7 & 1 & -2 & -2 & -5 \\
3 & 1 & 3 & -8 & 7
\end{array}\right)$$

$$\left(\begin{array}{ccccccccc}
-5 & -1 & 9 & -5 \\
-5 & 1 & 1 & -3 \\
9 & -6 & 4 & 8 \\
1 & -8 & 7 & -5
\end{array}\right)$$

$$\left( \begin{array}{ccc|c} -34 & -62 & -159 & -704 & 696 & 311 \\ 338 & -237 & -274 & -506 & -716 & -884 \end{array} \right) \left( \begin{array}{ccc|c} 99 & 18 & 50 & 58 \\ -99 & -18 & 54 & 78 \end{array} \right)$$

$$\begin{pmatrix}
-4 & 1 & 2 \\
-5 & -7 & 2
\end{pmatrix}$$

$$\begin{vmatrix}
94 & -95 & 55 & 46 \\
83 & -90 & 91 & 20 \\
-17 & -84 & 55 & 35 \\
-40 & 16 & -51 & 32
\end{vmatrix}$$

$$\left(\begin{array}{ccc|ccc|c}1 & 26 & 67 & -57 & -34 & -41\\90 & 30 & -20 & -61 & 10\end{array}\right) \left(\begin{array}{cccc|c}5 & 1 & 3 & -5 & 1 & -9\\1 & 0 & 3 & -6 & -4 & -9\\-2 & -4 & 9 & 2 & -2\end{array}\right| -9\\-5$$

$$\left(\begin{array}{ccc|c}
-82 & -74 & 21 & 76 \\
-42 & 14 & -82 & 70
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
8 & -9 & -9 & 9 \\
-1 & -7 & 9 & -6 \\
0 & 2 & 4 & -5
\end{array}\right)$$

$$\left(\begin{array}{ccc|c}
-95 & 46 & -87 \\
-80 & -15 & 2
\end{array}\right) \quad \left(\begin{array}{ccc|c}
-97 & -78 & -99 & 99 \\
-75 & -18 & -28 & 58 \\
66 & -93 & -36 & 69
\end{array}\right)$$

$$\begin{pmatrix}
-54 & 91 & 78 & -61 & -3 \\
28 & 95 & -95 & 44 & 86 \\
98 & 47 & -10 & -76 & 0
\end{pmatrix}$$

$$\begin{pmatrix}
-4 & -4 \\
5 & -7 \\
-3 & -1 \\
3 & 5
\end{pmatrix}$$

$$\begin{pmatrix}
55 & -54 & 68 & | & 80 \\
13 & -45 & -76 & | & 91 \\
0 & 34 & 59 & | & 87
\end{pmatrix}$$

$$\begin{pmatrix}
-3 & -9 & -3 & 0 \\
-9 & 5 & 8 & -6 \\
-6 & -5 & -3 & -2 \\
7 & -8 & -2 & 4 \\
-6 & 1 & 9 & 3
\end{pmatrix}$$

$$\left(\begin{array}{cc|c}
-34 & 1 & -62 \\
-20 & -80 & -1
\end{array}\right) \qquad \left(\begin{array}{cc|c}
2 & -8 & -3 & -1 \\
-1 & -7 & 7 & -9 \\
6 & 5 & 3 & -8
\end{array}\right)$$

$$\begin{vmatrix}
 -8 & -9 \\
 8 & 1
 \end{vmatrix}
 = 
 \begin{pmatrix}
 5 & 2 & 9 \\
 -9 & -3 & 8 \\
 -9 & 8 & -6 \\
 -9 & -6 & -6
 \end{pmatrix}$$

$$\begin{bmatrix} 6 & -2 & -2 & 1 \\ 9 & -5 & 9 & 7 \\ -8 & -3 & 7 & 5 \\ 9 & -3 & 3 & -6 \end{bmatrix} \qquad \begin{pmatrix} -7 & 8 \\ 6 & 5 \end{pmatrix}$$

$$\begin{vmatrix} 189 & -623 & 945 & 886 \\ -449 & 932 & -840 & -385 \\ 121 & 823 & 547 & 568 \\ -216 & 197 & -843 & -435 \end{vmatrix} \begin{vmatrix} 34 & -20 & 57 & -99 & -59 \\ 6 & -92 & -36 & 15 & -96 \\ -48 & -24 & -89 & 27 & 77 \\ 20 & -16 & -46 & -34 & -14 \end{vmatrix} -$$

$$\begin{vmatrix}
 -6 & 1 & 9 \\
 -4 & -9 & -4 \\
 3 & -8 & 9
 \end{vmatrix}
 =
 \begin{pmatrix}
 -3 & -7 & -8 & 3 & 2 & 9 \\
 -7 & 9 & 9 & 1 & 5 & 9 \\
 -9 & -3 & -1 & 3 & 7 & -1
 \end{pmatrix}$$

$$\begin{pmatrix} -1 & 2 & -7 \\ -7 & 1 & 3 \end{pmatrix} \begin{pmatrix} -31 & 43 & -78 & 93 & 5 & 94 \\ 41 & 45 & -33 & 72 & 84 & 88 \\ -86 & -51 & 26 & -63 & -8 & -62 \\ 23 & -80 & -17 & -36 & 2 & -11 \\ 36 & -48 & 65 & -64 & -65 & -94 \end{pmatrix}$$

$$\left(\begin{array}{cc|c}
-2 & 4 \\
7 & -2
\end{array}\right) \qquad \left(\begin{array}{cc|c}
1 & -5 & -8 \\
5 & -8 & 8
\end{array}\right)$$

$$\begin{pmatrix}
-98 & -85 & -28 \\
67 & -88 & -70 \\
63 & 36 & 35 \\
13 & 61 & 13
\end{pmatrix}
\begin{vmatrix}
83 & -89 & -57 & -16 \\
21 & 13 & -25 & 25 \\
-3 & -97 & 60 & -53 \\
-96 & -84 & -6 & 80
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
-57 & 61 & 30 & 54 \\
-36 & 30 & 37 & 1
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
42 & 33 & 77 & 57 \\
-71 & -11 & 1 & -34 \\
-73 & 67 & 71 & -36
\end{array}\right)$$

$$\left( \begin{array}{cc|cc|c} 22 & 67 & 24 \\ 94 & -24 & 79 \end{array} \right) \quad \left( \begin{array}{cc|cc|c} 880 & -5 & 695 & 767 & 531 \\ 842 & 243 & -98 & 642 & -317 \end{array} \right)$$

$$\begin{pmatrix} 59 & 96 & -44 \\ -43 & 59 & -65 \\ -11 & -98 & 27 \end{pmatrix} \begin{pmatrix} -829 & -696 & -485 & 677 \\ -851 & -162 & -498 & -137 \end{pmatrix}$$

$$\begin{pmatrix}
-708 & -15 & 751 & 838 & 114 \\
-278 & -748 & -770 & 265 & -507
\end{pmatrix}
\begin{vmatrix}
734 & -824 & -195 & -90
\end{vmatrix}$$

$$\begin{vmatrix}
39 & 44 & -89 \\
-11 & 9 & 6 \\
77 & 42 & 13
\end{vmatrix}$$

$$\begin{pmatrix}
-47 & 42 & 93 & | -36 \\
28 & -22 & -18 & | 30 \\
14 & 38 & 1 & | -76
\end{pmatrix}$$

$$\left|\begin{array}{cc}
8 & 3 \\
1 & -6
\end{array}\right|$$

$$\left(\begin{array}{cc}
-2 & -8 \\
-5 & -5
\end{array}\right)$$

$$\begin{vmatrix}
8 & 9 & 6 \\
-8 & 0 & 9 \\
0 & 0 & -2
\end{vmatrix}
\qquad
\begin{pmatrix}
-72 & 86 & -92 & 77 & | & -31 \\
83 & 14 & 71 & 30 & | & 5
\end{pmatrix}$$

$$\left(\begin{array}{cccc}
-4 & -3 & -3 & 1 \\
-7 & -6 & -7 & 8
\end{array}\right) \qquad \left|\begin{array}{ccccc}
-55 & 391 \\
-658 & -47
\end{array}\right|$$

$$\left(\begin{array}{cc|c}
3 & 4 & 9 \\
8 & 8 & -7
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-42 & -25 & 98 & 3 \\
-52 & 24 & 60 & 88
\end{array}\right)$$

$$\left(\begin{array}{ccc|c} -75 & 36 & -74 & -62 & -60 \\ 34 & -87 & 67 & -77 & -33 \end{array}\right) \qquad \left(\begin{array}{ccc|c} 0 & -5 & 5 \\ 3 & 8 & 1 \end{array}\right)$$

$$\begin{pmatrix}
1 & -9 & 6 & 2 & | & 8 \\
0 & 1 & 2 & -3 & | & 4 \\
7 & -9 & -9 & -1 & | & -5
\end{pmatrix}$$

$$\begin{pmatrix}
-33 & 87 & -23 \\
37 & 48 & -64 \\
52 & 85 & -93 \\
3 & 49 & -61 \\
-83 & -5 & -78
\end{pmatrix}$$

$$\begin{pmatrix} -3 & -8 \\ 3 & -3 \\ 3 & 3 \\ 3 & -3 \end{pmatrix} \qquad \begin{pmatrix} -1 & 0 & -4 & 9 \\ -1 & -6 & 5 & -8 \\ 9 & 2 & 3 & 4 \\ 6 & -1 & 8 & -1 \end{pmatrix}$$

$$\begin{pmatrix}
1 & 1 & 2 & 2 & 1 & 9 \\
-7 & -3 & -3 & 8 & 0 & -4 \\
-1 & 4 & -1 & -6 & 1 & 9 \\
-6 & 5 & 1 & -5 & 4 & 3 \\
-3 & -8 & 5 & -2 & 9 & 3
\end{pmatrix}
\begin{vmatrix}
-8 & 3 & 6 & -2 \\
2 & -2 & 5 & -2 \\
-4 & 9 & -3 & 2 \\
2 & 8 & -3 & 7
\end{vmatrix}$$

$$\left| \begin{array}{ccc|c} 4 & -2 \\ -2 & -1 \end{array} \right| \qquad \left( \begin{array}{ccc|c} -7 & 9 & -1 & 8 & -2 \\ -9 & 2 & 8 & -9 & -4 \end{array} \right)$$

$$\left(\begin{array}{cc|c}
4 & -51 & 4 \\
-82 & 79 & 76
\end{array}\right) \qquad \left|\begin{array}{cc|c}
-97 & 31 & 53 \\
29 & -91 & 23 \\
-57 & 19 & -33
\end{array}\right|$$

$$\begin{pmatrix} -6 & -8 \\ -5 & 9 \\ -7 & -7 \end{pmatrix} \qquad \begin{vmatrix} 72 & 65 & 91 & 40 \\ -83 & 55 & 56 & 63 \\ 76 & 71 & -9 & -53 \\ 65 & -79 & 26 & -1 \end{vmatrix}$$

$$\begin{pmatrix}
26 & -91 & -62 & | & -35 \\
34 & -80 & -89 & | & 10
\end{pmatrix}
\begin{vmatrix}
989 & -239 & 676 & -378 \\
125 & -820 & 850 & -889 \\
923 & -792 & 976 & 644 \\
-60 & 156 & 930 & 446
\end{vmatrix}$$

$$\begin{pmatrix}
2 & 0 & 8 & 2 \\
-4 & -7 & -7 & -4 \\
-7 & -7 & 0 & 8
\end{pmatrix}$$

$$\begin{pmatrix}
-23 & 99 & 31 \\
67 & 34 & -60
\end{pmatrix}$$

$$\begin{pmatrix} -5 & -4 & 1 & -8 & -4 \\ 7 & -6 & -6 & 6 & -7 \\ 4 & 5 & 9 & -6 & 5 \\ -1 & 2 & 1 & 7 & 9 \\ 9 & 2 & 6 & 9 & 7 \end{pmatrix} \qquad \begin{pmatrix} 204 & -122 \\ 949 & -295 \\ -464 & 182 \\ -525 & 999 \end{pmatrix}$$

$$\begin{pmatrix} -18 & -76 & -96 & -99 & | & -72 \\ -78 & -57 & 60 & -42 & | & -57 \\ -55 & 61 & 89 & -79 & | & -28 \\ -56 & -97 & 53 & 92 & | & 79 \end{pmatrix} \begin{pmatrix} -60 & -34 & -83 & 34 & | & 12 \\ 46 & -18 & 84 & -99 & | & 57 \\ 3 & 38 & -70 & 38 & | & -71 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
117 & -288 & 202 & 281 \\
254 & 956 & 391 & -461
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
0 & 0 \\
-2 & -1
\end{array}\right|$$

$$\left(\begin{array}{ccc|c}
0 & 4 \\
-5 & -2
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
0 & -7 & 0 & 3 & 3 \\
4 & -6 & 2 & -8 & 8 \\
0 & -8 & 1 & -2 & -9
\end{array}\right)$$

$$\left(\begin{array}{ccc|c}
44 & 17 & 25 & 84 \\
-80 & -1 & 67 & -89 \\
1 & -85 & 41 & -19
\end{array}\right)
\left(\begin{array}{ccc|c}
2 & 7 & 8 & 6 & 6 \\
5 & -3 & -5 & 2 & 0 \\
-8 & -8 & -5 & 9 & 6 \\
2 & 1 & -5 & 9 & -7
\end{array}\right)$$

$$\begin{vmatrix}
92 & 74 \\
89 & 80
\end{vmatrix}
\qquad
\left(
\begin{array}{ccc|c}
-1 & 0 & 7 & -4 & -6 & -9 \\
6 & -1 & -1 & -8 & 8 & 5
\end{array}
\right)$$

$$\begin{pmatrix}
9 & 8 \\
-6 & -4 \\
-5 & -8
\end{pmatrix}$$

$$\begin{pmatrix}
32 & -36 & -89 & -46 \\
83 & -31 & 86 & -55
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
2 & 9 & -3 & 7 & -7 \\
4 & 8 & -8 & 5 & -9
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-6 & 74 \\
97 & -97
\end{array}\right)$$

$$\begin{pmatrix}
-5 & -9 & -9 & -1 \\
-6 & 7 & -1 & 9 \\
-9 & -9 & -7 & -3
\end{pmatrix}$$

$$\begin{vmatrix}
60 & -81 \\
-60 & -18
\end{vmatrix}$$

$$\begin{pmatrix}
-5 & -131 & -909 & -767 \\
993 & -749 & -936 & -472
\end{pmatrix}$$

$$\begin{pmatrix}
78 & 37 \\
-23 & 8 \\
-40 & -36
\end{pmatrix}$$

$$\begin{pmatrix} 424 & 392 & -413 \\ 207 & 148 & -964 \\ 25 & -873 & -753 \\ 816 & -439 & 148 \end{pmatrix} \qquad \begin{pmatrix} 93 & -97 & 3 \\ 28 & -92 & -69 \end{pmatrix}$$

$$\begin{pmatrix} 32 & 95 & -44 & | & -49 \\ 20 & 79 & 14 & | & -25 \\ -49 & -59 & 96 & | & 26 \end{pmatrix} \quad \begin{pmatrix} 9 & -7 & 3 & | & 6 \\ 2 & -1 & -6 & | & -2 \\ -3 & -3 & 4 & | & 7 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
0 & -9 & -6 \\
5 & -1 & -6 \\
5 & 9 & 0
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
75 & 58 & 87 \\
91 & 35 & -97
\end{array}\right)$$

$$\begin{pmatrix} 64 & 43 & 52 & | & -4 \\ 91 & 12 & -37 & | & 22 \\ -86 & -49 & -54 & | & -48 \end{pmatrix} \begin{pmatrix} -7 & -3 & -7 & -2 & 8 & | & 1 \\ -1 & 9 & 4 & 4 & -3 & | & -6 \\ -9 & -1 & -1 & 5 & 2 & | & 9 \end{pmatrix}$$

$$\left(\begin{array}{cc} 9 & 5 \\ 7 & 9 \end{array}\right) \qquad \left|\begin{array}{cc} 9 & -9 \\ 3 & -5 \end{array}\right|$$

$$\begin{pmatrix}
2 & -8 \\
-8 & 7 \\
-2 & -7
\end{pmatrix}$$

$$\begin{vmatrix}
-86 & -93 & -20 & 85 \\
-74 & 8 & -71 & 77 \\
14 & 68 & 30 & 73 \\
-66 & -21 & -19 & -61
\end{vmatrix}$$

$$\begin{vmatrix}
-88 & 75 & -18 & -42 \\
13 & -73 & -34 & -13 \\
94 & 80 & -25 & 3 \\
-80 & 44 & -73 & 32
\end{vmatrix} \begin{pmatrix}
3 & -9 & 1 & -2 & -2 & 9 \\
9 & 6 & 4 & -2 & 7 & -8 \\
7 & 4 & -1 & 1 & -6 & 6
\end{pmatrix}$$

$$\begin{vmatrix}
7 & -6 & 7 & -9 \\
7 & 6 & -6 & -5 \\
8 & 6 & -9 & 9 \\
2 & 9 & 9 & -8
\end{vmatrix}$$

$$\begin{pmatrix}
-5 & 7 \\
-6 & -6
\end{pmatrix}$$

$$\begin{vmatrix} 8 & -4 & -5 & 1 \\ -7 & -8 & 8 & -9 \\ -2 & 4 & 8 & 8 \\ -5 & -8 & -1 & 1 \end{vmatrix} \begin{pmatrix} 680 & -445 & -787 & -78 \\ -854 & -919 & 538 & 109 \end{pmatrix}$$

$$\begin{vmatrix}
38 & 82 & -20 \\
-21 & -43 & -28 \\
-85 & 40 & 30
\end{vmatrix}$$

$$\begin{pmatrix}
7 & -4 & 7 & -5 & 7 \\
9 & -8 & 6 & 8 & 3 \\
-3 & 2 & 5 & 6 & -7 \\
-4 & 7 & 1 & 8 & -6
\end{pmatrix}$$

$$\begin{vmatrix}
7 & -13 & 61 & 65 \\
22 & -6 & -85 & 72 \\
-62 & 81 & -47 & -27 \\
64 & 46 & 94 & 50
\end{vmatrix}$$

$$\begin{pmatrix}
-8 & 6 & 1 & | -3 \\
7 & 0 & -2 & | 0 \\
-8 & 4 & -7 & | -4
\end{pmatrix}$$

$$\begin{pmatrix}
8 & 2 & 6 & 9 & -4 & -9 \\
-5 & -9 & -8 & 3 & -1 & -2 \\
-9 & -1 & -1 & -1 & 2 & -4 \\
-5 & 9 & 8 & 3 & -5 & -3 \\
-3 & 3 & 8 & 2 & -3 & -1
\end{pmatrix}
\begin{pmatrix}
-9 & 6 & 2 & 7 & -4 \\
-7 & -8 & -2 & -6 & -5 \\
9 & -7 & -7 & 0 & 6
\end{pmatrix}$$

$$\left| \begin{array}{ccc}
2 & -3 \\
0 & 9
\end{array} \right| 
\left( \begin{array}{cccc}
-41 & -69 & -40 \\
0 & 8 & 75 \\
-81 & -3 & -49
\end{array} \right)$$

$$\left(\begin{array}{ccccc} 0 & 3 & -1 & -6 \\ -2 & 1 & 9 & -9 \end{array}\right) \quad \left(\begin{array}{cccccc} -4 & 6 & -8 & 3 & 4 & -5 \\ 3 & -7 & 7 & 0 & 8 & -7 \end{array}\right)$$

$$\begin{vmatrix}
-4 & -4 \\
-2 & 8
\end{vmatrix}$$

$$\begin{vmatrix}
-1 & 3 & 4 & 7 \\
5 & -8 & -4 & -1 \\
4 & 7 & -3 & 2 \\
-6 & -1 & 9 & -4
\end{vmatrix}$$

$$\begin{vmatrix}
-477 & -462 \\
30 & -902
\end{vmatrix}$$

$$\begin{pmatrix}
4 & 6 & -1 & 9 \\
-2 & -5 & 4 & 1 \\
8 & 1 & -6 & -9 \\
-4 & 7 & -4 & 4
\end{pmatrix}$$

$$\begin{vmatrix}
-35 & 95 & 65 & -30 \\
-80 & -13 & -75 & -93 \\
-33 & 54 & 31 & 96 \\
42 & 18 & -47 & 83
\end{vmatrix}$$

$$\begin{pmatrix}
765 & -138 \\
-382 & 239 \\
-164 & -482
\end{pmatrix}$$

$$\begin{vmatrix}
9 & -2 & 0 & -7 \\
5 & 9 & -4 & -8 \\
9 & 5 & -4 & 5 \\
-7 & -9 & -5 & -1
\end{vmatrix}$$

$$\begin{pmatrix}
-78 & 29 & 57 \\
-30 & 33 & 48
\end{pmatrix}$$

$$\begin{vmatrix}
83 & -27 \\
-96 & -30
\end{vmatrix}
\qquad
\begin{pmatrix}
-60 & 42 & -87 & | -81 \\
51 & -4 & -97 & | -24
\end{pmatrix}$$

$$\begin{pmatrix}
-6 & 4 & -1 & 5 & 5 \\
4 & 9 & -3 & -4 & 9 \\
-5 & 3 & 6 & 8 & -1
\end{pmatrix}
\begin{vmatrix}
-19 & -735 & 597 \\
-364 & 589 & 690 \\
-805 & 988 & -624
\end{vmatrix}$$

$$\begin{pmatrix} 25 & 24 & | & 41 \\ -13 & -90 & | & -55 \end{pmatrix} \qquad \begin{pmatrix} -94 & -33 & -5 & | & -10 \\ -82 & -41 & -32 & | & 80 \end{pmatrix}$$

$$\begin{pmatrix}
-6 & 6 & 7 & -6 & 3 \\
4 & 4 & 6 & 7 & -2 \\
0 & 4 & -7 & -9 & -7
\end{pmatrix}
\begin{pmatrix}
9 & -3 & 3 & 0 & 1 & -3 \\
6 & 6 & 3 & 2 & -9 & 5 \\
-3 & -8 & -5 & -4 & -7 & -1 \\
7 & 2 & -2 & -3 & 7 & 4
\end{pmatrix}$$

$$\begin{pmatrix} -99 & -58 \\ 4 & 52 \\ -38 & -69 \\ -85 & 74 \\ -38 & -45 \end{pmatrix} \qquad \begin{vmatrix} 5 & 6 & -5 & 9 \\ 3 & 1 & -1 & -4 \\ 8 & -9 & -1 & -6 \\ 8 & 8 & -7 & 8 \end{vmatrix}$$

$$\begin{pmatrix} -9 & 3 & 6 & 7 & 2 \\ -7 & -3 & -9 & 6 & -3 \\ -5 & -7 & -9 & -7 & -8 \\ -5 & -3 & 7 & -7 & -5 \end{pmatrix} \begin{pmatrix} 75 & 1 & 63 & 61 & -57 \\ -82 & -59 & 17 & 35 & -68 \\ 49 & 14 & -7 & 2 & -73 \end{pmatrix}$$

$$\begin{pmatrix}
-6 & -1 & | & 4 \\
-6 & 6 & | & 0
\end{pmatrix} \qquad
\begin{pmatrix}
-115 & 11 & -643 & | & -69 \\
-407 & 592 & -240 & | & 235 \\
-774 & -576 & -140 & | & 138
\end{pmatrix}$$

$$\begin{pmatrix}
70 & 7 \\
-60 & -69
\end{pmatrix}$$

$$\begin{vmatrix}
6 & 4 & 1 & -9 \\
7 & -8 & -5 & -5 \\
3 & -8 & -1 & -3 \\
-6 & -4 & 5 & -6
\end{vmatrix}$$

$$\begin{pmatrix} 24 & -7 & 3 & | & -50 \\ 40 & 17 & -79 & | & 72 \\ 50 & 45 & -50 & | & 77 \end{pmatrix} \begin{pmatrix} 52 & -20 & -13 & 32 \\ -38 & 47 & 25 & -98 \\ 81 & -78 & -17 & -1 \end{pmatrix}$$

$$\begin{pmatrix}
31 & -30 & -1 & -6 & 81 \\
-5 & 2 & 22 & 15 & -64 \\
17 & -35 & -28 & 76 & -33
\end{pmatrix} \qquad
\begin{pmatrix}
-4 & 5 & 9 \\
-9 & -4 & 0
\end{pmatrix}$$

$$\begin{pmatrix}
-3 & 4 & -6 & 1 & 5 \\
-5 & 5 & -7 & 4 & 6 \\
5 & 3 & -7 & -2 & 2 \\
8 & 9 & 2 & -2 & 9
\end{pmatrix}
\begin{pmatrix}
98 & -54 & 58 & -41 & -25 \\
-42 & -55 & -79 & 30 & -18 \\
-63 & -11 & 62 & 31 & -5
\end{pmatrix}$$

$$\left(\begin{array}{cccc} 20 & -27 & 4 & -45 \\ -38 & -18 & -10 & -90 \end{array}\right) \left(\begin{array}{cccc} -14 & -18 & -78 & 62 \\ -48 & -15 & 43 & 81 \end{array}\right)$$

$$\begin{pmatrix}
3 & 4 & 7 \\
-5 & -8 & -4 \\
4 & 6 & -2 \\
-7 & -2 & 9
\end{pmatrix}$$

$$\begin{pmatrix}
89 & -16 & 57 | -26 \\
-17 & -86 & 99 | -46
\end{pmatrix}$$

$$\left(\begin{array}{cccc}
-17 & 44 & -36 \\
8 & 5 & -80
\end{array}\right) \qquad \left(\begin{array}{ccccc}
0 & -9 & 2 & 4 \\
7 & 1 & -9 & 6 \\
-9 & 1 & 1 & 6 \\
3 & -3 & -4 & 0
\end{array}\right)$$

$$\begin{pmatrix}
-7 & 9 & 70 & | & -95 \\
-77 & 55 & 30 & | & 86 \\
74 & 85 & 15 & | & -84
\end{pmatrix}$$

$$\begin{pmatrix}
7 & 6 & 7 & -5 & | & -2 \\
6 & 8 & -4 & -4 & | & 3 \\
0 & 0 & 9 & 9 & | & 7
\end{pmatrix}$$

$$\begin{vmatrix}
-62 & 89 & 88 \\
2 & 72 & 50 \\
-10 & -71 & -62
\end{vmatrix}$$

$$\begin{vmatrix}
-4 & -9 & 6 & -2 \\
6 & -4 & 5 & -1 \\
9 & -8 & 8 & -6 \\
9 & -6 & 1 & 4
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
4 & -8 & -3 & -6 \\
-2 & -7 & -3 & 9
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
-86 & -84 & 41 & -53 \\
-24 & -25 & 59 & -67 \\
66 & 34 & -88 & -4 \\
-81 & 0 & -7 & -92
\end{array}\right|$$

$$\begin{vmatrix}
-5 & -2 & 9 \\
-6 & -3 & -6 \\
-4 & -1 & -5
\end{vmatrix}$$

$$\begin{vmatrix}
-8 & -2 \\
0 & -5
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
-3 & -7 & -3 & 2 & -8 \\
0 & 6 & -5 & 8 & 5
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-4 & -5 \\
-7 & 2
\end{array}\right)$$

$$\begin{pmatrix}
-6 & -70 & -91 \\
86 & -47 & -81 \\
67 & -85 & 26
\end{pmatrix}
\qquad
\begin{pmatrix}
59 & 84 & | -67 \\
-66 & -70 & | -78
\end{pmatrix}$$

$$\left(\begin{array}{ccc|ccc} -4 & 5 & 2 & -4 \\ 8 & 5 & 2 & 3 \end{array}\right) \left(\begin{array}{ccc|ccc} -84 & -22 & 83 & 65 & 4 & 90 \\ 60 & -9 & -55 & -7 & 36 & -78 \end{array}\right)$$

$$\begin{pmatrix}
99 & 52 & -4 \\
-65 & 25 & 47 \\
75 & -44 & 74 \\
-28 & 52 & 69
\end{pmatrix}$$

$$\begin{vmatrix}
78 & -35 & 84 & 50 \\
52 & -53 & 47 & -41 \\
-83 & -14 & -36 & -53 \\
24 & -42 & 26 & 79
\end{vmatrix}$$

$$\begin{vmatrix}
48 & 59 & 74 \\
38 & 98 & 10 \\
-1 & -95 & 78
\end{vmatrix}$$

$$\begin{vmatrix}
4 & 3 & 7 & -1 \\
0 & 5 & -1 & -3 \\
4 & 7 & 3 & 0 \\
2 & 0 & -5 & 1
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
7 & 6 & 7 & 3 \\
-6 & -8 & -5 & 5
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-50 & 67 \\
-86 & 9 \\
-85 & 22
\end{array}\right)$$

$$\begin{pmatrix} -21 & -84 \\ -20 & -81 \\ -97 & -74 \end{pmatrix} \qquad \begin{vmatrix} -8 & 0 & 8 & -5 \\ -6 & -9 & -7 & -4 \\ -6 & -6 & -3 & 2 \\ 6 & -2 & 6 & 2 \end{vmatrix}$$

$$\left(\begin{array}{cccc}
7 & -6 & 5 & 6 \\
-1 & 9 & 2 & -8
\end{array}\right) \qquad \left(\begin{array}{cccc}
-12 & -81 \\
52 & 81 \\
-11 & 37
\end{array}\right)$$

$$\begin{vmatrix}
-1 & -5 \\
0 & -1
\end{vmatrix}$$

$$\begin{vmatrix}
46 & -30 & -16 \\
-35 & -82 & -73 \\
0 & -59 & -81
\end{vmatrix}$$

$$\begin{pmatrix} -6 & 7 & 6 \\ 2 & -4 & 1 \\ 9 & -6 & 4 \end{pmatrix} \qquad \begin{pmatrix} 51 & 61 & 44 \\ -15 & 18 & 33 \end{pmatrix}$$

$$\begin{pmatrix}
8 & 8 \\
2 & 0 \\
8 & -8 \\
3 & -8
\end{pmatrix}$$

$$\begin{vmatrix}
-5 & 2 & -5 \\
-3 & -8 & -2 \\
3 & 5 & 1
\end{vmatrix}$$

$$\begin{pmatrix}
-59 & -86 & -75 \\
90 & -87 & 6 \\
5 & -6 & -67
\end{pmatrix}
\qquad
\begin{pmatrix}
4 & 6 & 6 \\
-7 & 3 & -8 \\
9 & 8 & 0 \\
-6 & -2 & 5 \\
-6 & -8 & 2
\end{pmatrix}$$

$$\left(\begin{array}{cccc} 603 & -675 & -412 & -779 \\ 427 & 45 & -332 & 412 \end{array}\right) \left(\begin{array}{ccccc} -20 & -74 & -27 & 83 \\ -1 & 7 & 81 & -37 \end{array}\right)$$

$$\begin{pmatrix} -8 & -86 \\ 65 & -77 \\ -86 & -29 \\ -27 & 71 \end{pmatrix} \qquad \begin{pmatrix} 6 & 1 & 7 & -5 \\ -3 & -3 & 9 & 5 \\ -3 & 1 & 4 & 4 \\ 7 & 6 & 8 & 0 \end{pmatrix}$$

$$\begin{pmatrix}
-871 & 987 \\
530 & -78 \\
-670 & -222
\end{pmatrix}
\qquad
\begin{vmatrix}
-60 & -87 & 88 \\
17 & 63 & -6 \\
-62 & 36 & -74
\end{vmatrix}$$

$$\begin{vmatrix}
 0 & 1 & 9 \\
 1 & 8 & -7 \\
 -2 & 4 & -1
 \end{vmatrix}$$

$$\begin{pmatrix}
 0 & -7 \\
 -2 & -1 \\
 -4 & 2
 \end{pmatrix}$$

$$\begin{pmatrix}
88 & -57 & 96 & | & -15 \\
88 & -39 & 51 & | & -92 \\
-65 & 98 & 71 & | & -26
\end{pmatrix}$$

$$\begin{vmatrix}
0 & -8 & 0 \\
9 & 0 & -1 \\
1 & -8 & -5
\end{vmatrix}$$

$$\begin{pmatrix} -603 & -873 & 15 & -477 \\ -180 & 896 & -40 & 24 \end{pmatrix} \qquad \begin{pmatrix} -8 & -7 & -3 \\ 1 & 2 & 7 \end{pmatrix}$$

$$\begin{vmatrix}
-19 & -58 & -81 \\
-67 & -86 & -15 \\
20 & 23 & 23
\end{vmatrix}$$

$$\begin{pmatrix}
924 & 913 & 703 \\
903 & -61 & 713 \\
-567 & 467 & -768
\end{pmatrix}$$

$$\left| \begin{array}{ccc|c} 46 & -72 \\ -5 & 42 \end{array} \right| \qquad \left( \begin{array}{cccc|c} 2 & -4 & 7 & 7 & -9 \\ -7 & 8 & 5 & -5 & -5 \\ -9 & -3 & 4 & 4 & -5 \\ 2 & -1 & 0 & 6 & 7 \end{array} \right)$$

$$\begin{pmatrix} 260 & 559 & 632 & 973 & 898 & 394 \\ 521 & -824 & -382 & -305 & -944 & 192 \\ -772 & 742 & -295 & -958 & -411 & 923 \end{pmatrix} \begin{pmatrix} -18 & -2 & -24 \\ 85 & 19 & 2 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-86 & 34 & 31 \\
55 & -54 & 89
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
72 & -67 & -3 \\
-15 & 23 & -12
\end{array}\right)$$

$$\begin{vmatrix}
 -7 & -6 \\
 -4 & -2
 \end{vmatrix}$$

$$\begin{pmatrix}
 82 & -33 & | & 83 \\
 -66 & 62 & | & -93
 \end{pmatrix}$$

$$\begin{pmatrix} -4 & 7 \\ 5 & -1 \\ -7 & -9 \\ -6 & 4 \end{pmatrix} \qquad \begin{pmatrix} -4 & 70 \\ 65 & -85 \end{pmatrix}$$

$$\begin{pmatrix}
1 & -5 & 3 & 3 & 2 & 6 \\
3 & -4 & 0 & -1 & -1 & 9 \\
7 & 4 & 1 & -9 & -6 & -1 \\
2 & -1 & 2 & -7 & 9 & -2 \\
-7 & 0 & -5 & 8 & 2 & 9
\end{pmatrix}
\begin{pmatrix}
9 & 1 & -8 & -7 & -8 \\
-9 & -1 & -1 & -5 & -7 \\
4 & -5 & -6 & 5 & -1 \\
5 & 2 & -6 & -8 & 7
\end{pmatrix}$$

$$\left|\begin{array}{cc} 4 & 8 \\ 8 & 1 \end{array}\right| \qquad \left(\begin{array}{cc} -6 & 6 \\ -6 & 7 \end{array}\right)$$

$$\left(\begin{array}{ccc|c}
-5 & 6 & -3 & -5 & -8 & -6 \\
-7 & -8 & -5 & 0 & -3 & -6
\end{array}\right) \quad \left(\begin{array}{ccc|c}
-89 & 85 \\
73 & 43 \\
80 & -88 \\
-91 & 41 \\
-63 & 30
\end{array}\right)$$

$$\begin{pmatrix} -81 & -93 & -31 & 36 & -38 & 68 \\ -77 & -8 & 5 & 23 & -37 & -60 \\ 21 & -66 & -94 & 52 & -81 & -42 \\ 43 & -27 & -81 & -69 & 41 & -39 \end{pmatrix} \begin{pmatrix} 4 & -3 & 2 & | & 4 \\ -6 & 6 & -5 & | & 1 \\ 0 & -4 & -1 & | & 7 \end{pmatrix}$$

$$\left(\begin{array}{cc|c}
4 & 4 & 9 \\
-2 & 8 & -9
\end{array}\right) \qquad \left(\begin{array}{cc|c}
3 & 0 \\
2 & 1
\end{array}\right)$$

$$\begin{pmatrix}
-3 & -2 & 5 & 9 \\
0 & -4 & 0 & 0 \\
-6 & 4 & -4 & -7
\end{pmatrix}$$

$$\begin{pmatrix}
3 & -20 & 20 \\
79 & -12 & -6 \\
-37 & -58 & 50
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c} -4 & -2 & -7 & 0 \\ 8 & 4 & -8 & 9 \end{array}\right) \left(\begin{array}{ccc|c} 94 & -308 & 106 & 531 & -591 \\ -42 & -485 & -28 & -604 & -747 \\ -759 & -770 & 549 & 465 & -202 \end{array}\right)$$

$$\begin{pmatrix} -1 & 6 & 5 & 3 & -7 \\ 2 & -5 & -8 & 9 & 6 \\ 0 & -2 & 3 & 2 & -5 \\ 1 & -9 & 1 & 8 & 9 \\ -7 & 8 & 7 & 6 & 5 \end{pmatrix} \begin{pmatrix} -77 & -92 & 25 & 44 & 82 \\ -41 & -13 & -19 & -39 & -67 \\ -28 & 17 & -60 & 76 & -28 \end{pmatrix}$$

$$\begin{vmatrix}
 5 & -7 & 8 \\
 -7 & -6 & 2 \\
 1 & 5 & 4
 \end{vmatrix}$$

$$\begin{pmatrix}
 2 & -7 & | & 8 \\
 4 & 7 & | & -5
 \end{pmatrix}$$

$$\begin{vmatrix} 54 & -17 & -68 & 57 \\ -42 & 35 & -49 & 24 \\ -8 & -40 & 0 & 79 \\ 59 & 68 & -48 & -76 \end{vmatrix} \begin{pmatrix} -61 & 60 & -71 & -22 & 61 & -18 \\ -31 & -70 & 15 & 35 & 80 & -12 \\ -36 & 82 & 67 & 83 & 41 & 31 \\ -29 & -14 & -81 & 17 & 80 & -61 \end{pmatrix}$$

$$\begin{pmatrix}
9 & -2 \\
9 & -3 \\
-6 & -5 \\
-3 & -7
\end{pmatrix}$$

$$\begin{vmatrix}
-693 & -558 \\
364 & -225
\end{vmatrix}$$

$$\left( \begin{array}{ccc|c} 79 & -56 & 70 & 80 & -41 & -77 \\ 10 & -2 & 79 & -97 & 70 & -75 \end{array} \right) \left( \begin{array}{ccc|c} 8 & -8 & 7 & 9 & -3 \\ 1 & -2 & -7 & -4 & 8 \\ 3 & 0 & -2 & 7 & -3 \\ -8 & -9 & -6 & 3 & 3 \end{array} \right)$$

$$\begin{pmatrix}
6 & 6 & -2 \\
-4 & 2 & -8 \\
8 & -7 & 5 \\
-7 & -6 & 7
\end{pmatrix}$$

$$\begin{pmatrix}
6 & 1 & 3 & -8 & 9 \\
6 & -8 & 8 & -2 & -1 \\
-1 & 4 & -3 & 0 & 1 \\
-9 & 4 & -6 & 4 & 3
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
2 & -8 & -1 & -2 & -1 \\
7 & 2 & 8 & 8 & -2
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
1 & -62 \\
76 & -32
\end{array}\right)$$

$$\left(\begin{array}{cccc} 45 & 13 & 80 & -67 \\ 3 & 64 & 86 & -85 \end{array}\right) \qquad \left(\begin{array}{ccc} 90 & -77 \\ 13 & -87 \end{array}\right)$$

$$\begin{pmatrix} 18 & -13 & -51 & 48 & 42 & 95 \\ -33 & 97 & -48 & 19 & 53 & 82 \\ 66 & 88 & 82 & -10 & -26 & -1 \\ 89 & -20 & 98 & -67 & 83 & -77 \end{pmatrix} \begin{pmatrix} 322 & -449 & -959 & 3 \\ 158 & 133 & 56 & 1 \\ 760 & 998 & -426 & -1 \end{pmatrix}$$

$$\begin{vmatrix} -71 & -73 \\ -70 & -72 \end{vmatrix} = \begin{pmatrix} -207 & 153 & 667 & -428 & 222 \\ 235 & -539 & 487 & 537 & 421 \\ 698 & 249 & 409 & 895 & -807 \end{pmatrix}$$

$$\begin{pmatrix} -6 & 3 \\ 8 & 2 \\ -6 & 6 \end{pmatrix} \qquad \begin{pmatrix} 0 & -3 \\ -8 & 2 \\ 7 & 6 \\ -5 & -5 \end{pmatrix}$$

$$\left(\begin{array}{cc|c}
24 & -2 & -11 \\
-62 & -3 & 26
\end{array}\right) \qquad \left(\begin{array}{cc|c}
33 & -82 & -52 \\
-22 & -86 & -75
\end{array}\right)$$

$$\left(\begin{array}{ccc|c}
9 & 1 & 9 & -7 \\
-2 & -6 & -8 & 6 \\
3 & 5 & -3 & 4
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
5 & 7 \\
-8 & 0 \\
-9 & 2 \\
3 & -1
\end{array}\right)$$

$$\begin{vmatrix}
-62 & -86 & -83 & 85 \\
12 & -64 & -40 & -16 \\
-56 & 38 & -18 & 2 \\
-15 & -29 & 8 & -8
\end{vmatrix}$$

$$\begin{pmatrix}
19 & -55 & 38 \\
70 & 2 & -34
\end{pmatrix}$$

$$\begin{pmatrix}
-95 & -46 & 52 \\
40 & -67 & 26 \\
-23 & -74 & -70
\end{pmatrix}
\qquad
\begin{pmatrix}
11 & 37 & -97 & 58 \\
64 & -65 & -1 & 50 \\
76 & -10 & -68 & 10
\end{pmatrix}$$

$$\begin{pmatrix} -22 & 17 \\ -29 & -53 \\ 56 & -98 \end{pmatrix} \qquad \begin{vmatrix} 97 & -90 & -36 \\ -73 & -60 & 27 \\ 95 & 86 & -72 \end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
-3 & -3 & 5 & 5 \\
9 & 9 & -6 & -6 \\
3 & 1 & -6 & -2
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
-9 & -9 & -5 \\
-1 & -6 & 6 \\
-4 & -2 & -5
\end{array}\right|$$

$$\left(\begin{array}{cc|c}
-3 & -2 & 7 \\
-2 & 3 & -9
\end{array}\right) \qquad \left(\begin{array}{cc|c}
78 & -6 & 14 \\
-66 & 3 & -98
\end{array}\right)$$

$$\begin{vmatrix}
5 & -6 & 6 \\
5 & -3 & -5 \\
8 & 6 & -5
\end{vmatrix}$$

$$\begin{pmatrix}
98 & -98 & | & -63 \\
92 & 10 & | & 5
\end{pmatrix}$$

$$\begin{pmatrix}
-77 & -67 \\
52 & 82
\end{pmatrix} \qquad \qquad \begin{pmatrix}
82 & -98 & | & 13 \\
53 & -55 & | & 31
\end{pmatrix}$$

$$\begin{pmatrix}
-1 & -4 & 6 \\
-2 & -7 & 8
\end{pmatrix}
\begin{vmatrix}
-81 & -12 & -75 & 27 \\
49 & 62 & 28 & 94 \\
-46 & -94 & -33 & -40 \\
-41 & 27 & 92 & 99
\end{vmatrix}$$

$$\begin{vmatrix}
-4 & 8 & 4 \\
-7 & -4 & -6 \\
-5 & 8 & -3
\end{vmatrix}
\qquad
\begin{pmatrix}
61 & -4 & 38 & | & -77 \\
70 & 17 & -17 & | & 4 \\
10 & 4 & 30 & | & 30
\end{pmatrix}$$

$$\begin{pmatrix}
-54 & 5 & 14 \\
-57 & 67 & -95
\end{pmatrix}
\qquad
\begin{pmatrix}
4 & -3 & 5 \\
-5 & -9 & 0
\end{pmatrix}$$

$$\begin{pmatrix} -90 & -12 & -98 & | & -32 \\ -55 & -25 & -84 & | & 45 \\ 87 & 58 & 19 & | & -8 \end{pmatrix} \begin{pmatrix} -43 & 43 & 9 & 74 \\ 8 & -47 & 15 & 24 \\ 59 & -8 & 36 & 68 \\ -85 & -33 & 96 & -41 \end{pmatrix}$$

$$\begin{vmatrix}
-2 & -2 & -9 & -2 \\
-1 & -3 & -1 & -2 \\
-4 & -5 & 0 & -6 \\
-3 & -7 & 9 & 9
\end{vmatrix}$$

$$\begin{vmatrix}
99 & 39 & 20 \\
-93 & -9 & -18 \\
41 & -55 & 78
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c} -1 & -3 & -6 & -6 & -9 \\ -9 & -1 & -9 & 5 & 4 \end{array}\right) \quad \left(\begin{array}{ccc|c} 0 & -8 & 8 & 9 \\ -7 & -2 & 0 & -9 \end{array}\right)$$

$$\begin{pmatrix}
0 & 8 \\
-5 & 6
\end{pmatrix} \qquad \begin{pmatrix}
8 & -5 \\
9 & 3 \\
3 & -2 \\
-5 & 8
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
7 & 0 & 7 & -1 \\
-1 & 1 & 5 & 7 \\
-1 & -3 & 3 & -8
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
6 & -5 & 1 & 6 \\
4 & -8 & -3 & -3 \\
9 & -3 & -6 & -1 \\
4 & 9 & 9 & 9
\end{array}\right)$$

$$\begin{vmatrix}
3 & 0 & 3 & -9 \\
1 & -1 & -7 & 2 \\
3 & 2 & -8 & -7 \\
-5 & -1 & -8 & 3
\end{vmatrix}$$

$$\begin{pmatrix}
9 & -9 \\
4 & -6 \\
9 & -6 \\
4 & 5 \\
-6 & 5
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
76 & 8 & 10 & 90 \\
-3 & -12 & -8 & -43
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
22 & -75 & 60 \\
-67 & -38 & -63
\end{array}\right)$$

$$\begin{vmatrix} -608 & 741 & 111 \\ -332 & 798 & 245 \\ -258 & 809 & 545 \end{vmatrix} = \begin{pmatrix} 7 & 9 & -9 & 8 & -7 \\ -6 & -7 & 0 & 0 & 1 \\ -7 & 3 & -3 & 7 & -7 \\ -1 & 4 & -1 & -5 & -8 \\ 6 & 1 & 6 & 4 & 4 \end{pmatrix}$$

$$\begin{pmatrix}
58 & 60 & 88 & -97 & -57 & 39 \\
-60 & 94 & 85 & -2 & 92 & -94 \\
35 & 61 & 96 & -79 & -12 & 2 \\
-7 & -44 & 39 & -7 & -87 & 66
\end{pmatrix}
\begin{vmatrix}
-7 & -7 & -2 & 0 \\
-1 & 2 & 1 & 4 \\
-4 & 5 & 3 & -1 \\
1 & -7 & -2 & -2
\end{vmatrix}$$

$$\begin{pmatrix} -417 & 670 & -628 & 26 & 158 & | & -624 \\ -146 & 905 & 515 & -387 & -663 & | & 245 \end{pmatrix} \begin{pmatrix} -16 & -23 \\ -26 & 65 \end{pmatrix}$$

$$\left(\begin{array}{cc}
-7 & 2 \\
-5 & 9
\end{array}\right) \qquad \left|\begin{array}{cc}
85 & -32 \\
59 & -50
\end{array}\right|$$

$$\begin{pmatrix}
-3 & 6 & | & 8 \\
-2 & -9 & | & 8
\end{pmatrix} \qquad \begin{vmatrix}
6 & -8 & 3 & 1 \\
-4 & 1 & 5 & 8 \\
1 & 8 & -2 & 7 \\
-9 & -1 & -3 & 5
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
3 & 5 & -5 & 1 & -5 \\
-4 & 8 & -3 & 2 & -9 \\
0 & 8 & 5 & -1 & -4
\end{array}\right)
\quad
\left|\begin{array}{ccc|c}
-6 & 1 & 3 & 1 \\
7 & -4 & -4 & 0 \\
-1 & -7 & -9 & 4 \\
0 & -3 & -7 & -7
\end{array}\right|$$

$$\left(\begin{array}{cccc}
88 & -62 & 18 \\
-26 & -23 & -16
\end{array}\right) \qquad \left|\begin{array}{ccccc}
73 & -61 & -98 \\
63 & -37 & -13 \\
-7 & 98 & -88
\end{array}\right|$$

$$\left( \begin{array}{ccc|c} 9 & 6 & 1 & -9 \\ 1 & -8 & 9 & -5 \\ -9 & 4 & -8 & 0 \end{array} \right) \left( \begin{array}{ccc|c} 6 & 29 & 64 & -72 & -40 \\ -60 & 46 & 18 & -29 & -79 \end{array} \right)$$

$$\left(\begin{array}{ccc|c}
-2 & -95 \\
19 & -24
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-4 & -5 & -3 & 7 \\
-6 & 5 & 9 & -3 \\
7 & 1 & 3 & -3
\end{array}\right)$$

$$\begin{vmatrix}
-71 & -29 \\
-40 & 56
\end{vmatrix}$$

$$\begin{pmatrix}
7 & -6 & 7 & -5 & -7 & 7 \\
-9 & 2 & -3 & 6 & 3 & 4 \\
-2 & -5 & 0 & -3 & -5 & 8 \\
8 & 5 & -1 & -1 & 9 & 6
\end{pmatrix}$$

$$\begin{pmatrix} 60 & -73 & -14 & | & -61 \\ -81 & 69 & -48 & | & 84 \\ -53 & 14 & -53 & | & -20 \end{pmatrix} \begin{pmatrix} 24 & -72 & 21 & -47 & -30 & | & 77 \\ -81 & 70 & 53 & -67 & -11 & | & -14 \end{pmatrix}$$

$$\begin{pmatrix} -77 & 96 & -59 & 88 \\ -32 & 9 & 9 & -28 \\ 54 & -80 & -23 & -51 \end{pmatrix} \qquad \begin{pmatrix} 30 & 33 & 32 & -36 \\ 2 & 58 & 11 & 31 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
21 & 35 & -39 \\
76 & 10 & -55
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
231 & 713 & 888 & -771 \\
384 & 330 & 132 & -870 \\
420 & -730 & -196 & 798
\end{array}\right)$$

$$\left(\begin{array}{ccc|c}
49 & 44 & -12 & -47 \\
-56 & -16 & -12 & 78
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
63 & 64 & -51 \\
-52 & -50 & -29 \\
50 & -96 & -18
\end{array}\right)$$

$$\begin{pmatrix}
1 & 9 & 6 \\
9 & 4 & 0
\end{pmatrix}$$

$$\begin{vmatrix}
2 & -5 & 8 & -3 \\
5 & 0 & -1 & -5 \\
4 & 5 & -3 & 2 \\
5 & 9 & -6 & -7
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
-2 & 4 & 3 & -7 \\
-6 & -2 & 9 & 9
\end{array}\right) \quad \left(\begin{array}{ccc|c}
1 & -1 & -5 & -2 & -5 \\
6 & -2 & 6 & 4 & -5 \\
9 & -7 & -4 & 0 & 6 \\
-5 & 6 & -9 & -4 & -1
\end{array}\right)$$

$$\begin{pmatrix} 0 & 6 & 8 & 5 & -6 & | & -9 \\ -9 & 8 & -1 & 8 & -1 & | & 4 \\ -2 & -7 & 4 & 8 & 8 & | & 3 \\ 5 & -6 & 0 & 6 & 0 & | & -5 \\ -6 & 5 & -6 & -7 & 6 & | & 9 \end{pmatrix} \begin{pmatrix} -97 & -54 & -10 & 6 & 52 & | & -10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 10 \\ 12 & -27 & 60 & 8 & -63 & | & 1$$

$$\left| \begin{array}{ccc}
46 & -41 \\
1 & 55
\end{array} \right| \qquad \left( \begin{array}{cccc}
-3 & -1 & 4 \\
-5 & 0 & -3 \\
4 & 6 & 0
\end{array} \right)$$

$$\left( \begin{array}{ccc|c} -7 & -8 & -4 & -7 & 5 & -4 \\ 9 & -6 & 2 & -6 & 9 & -3 \end{array} \right) \quad \left( \begin{array}{ccc|c} 20 & 49 & 81 \\ -68 & -75 & 8 \end{array} \right)$$

$$\left(\begin{array}{ccc}
36 & 24 \\
-29 & -81
\end{array}\right) \qquad \left|\begin{array}{ccc}
-57 & -25 \\
-25 & -41
\end{array}\right|$$

$$\begin{pmatrix}
-65 & -5 & -80 & -41 \\
2 & 17 & 15 & -28 \\
-3 & 76 & -74 & 5 \\
-66 & 70 & 49 & -84 \\
34 & -11 & -78 & -60
\end{pmatrix}
\begin{vmatrix}
-212 & -517 & -759 \\
497 & 468 & 452 \\
356 & -726 & 56
\end{vmatrix}$$

$$\begin{vmatrix}
3 & -6 & -5 & 8 \\
7 & 0 & -7 & -6 \\
2 & -1 & -5 & -1 \\
8 & -9 & -1 & -6
\end{vmatrix}$$

$$\begin{pmatrix}
-77 & 94 & -61 & 74 & 43 \\
20 & -66 & -34 & 70 & -8
\end{pmatrix}$$

$$\begin{pmatrix}
-87 & -38 & 93 & -29 & 39 \\
-67 & -12 & 56 & 4 & 68 \\
-71 & -37 & -85 & -68 & 39 \\
67 & -59 & 17 & -84 & -13
\end{pmatrix}$$

$$\begin{vmatrix}
-3 & 53 \\
43 & 16
\end{vmatrix}$$

$$\begin{pmatrix}
-22 & -45 & | & 43 \\
-38 & 81 & | & 92
\end{pmatrix} \qquad \qquad \begin{pmatrix}
-1 & -9 & -1 & | & 4 \\
1 & 2 & -8 & | & 3 \\
-9 & -2 & -8 & | & 8
\end{pmatrix}$$

$$\begin{pmatrix} -64 & -50 & 96 \\ 58 & 87 & -94 \\ -34 & 68 & -13 \\ -91 & -34 & 84 \end{pmatrix} \begin{vmatrix} -814 & 138 & -166 & 160 \\ -525 & 653 & 780 & -930 \\ 774 & -876 & 277 & -867 \\ 724 & -626 & -971 & -540 \end{vmatrix}$$

$$\left(\begin{array}{ccccc}
8 & 0 & 8 & 7 & 5 \\
-3 & -9 & 6 & 9 & 8
\end{array}\right) \qquad \left|\begin{array}{ccccc}
3 & -294 \\
-262 & 517
\end{array}\right|$$

$$\left(\begin{array}{ccccc} 64 & -83 & 32 & 52 \\ -25 & 14 & 18 & -32 \end{array}\right) \left(\begin{array}{cccccc} -8 & 1 & -7 & -3 & -2 \\ -7 & -4 & 5 & -5 & -1 \end{array}\right)$$

$$\begin{vmatrix}
 -2 & 3 & 0 \\
 2 & 6 & 4 \\
 0 & -1 & 8
 \end{vmatrix}$$

$$\begin{pmatrix}
 7 & 1 & -1 & | & 1 \\
 -3 & 3 & -6 & | & 3 \\
 3 & -2 & 8 & | & 8
 \end{pmatrix}$$

$$\begin{pmatrix} -599 & 808 & 295 & 170 & 630 \\ -102 & -548 & -223 & -260 & -474 \end{pmatrix} \begin{vmatrix} 355 & 937 & 52 & -66 \\ -722 & 715 & -205 & 52 \\ -998 & -319 & -873 & -72 \\ 155 & -207 & 172 & -92 \end{vmatrix}$$

$$\left(\begin{array}{cccc}
6 & -3 & 2 & 6 \\
1 & -1 & 2 & -5
\end{array}\right) \qquad \left(\begin{array}{cccc}
17 & 7 & -5 \\
-45 & 81 & -52 \\
33 & -56 & 46
\end{array}\right)$$

$$\left(\begin{array}{cc|c}
-2 & -43 & -52 \\
-22 & 84 & 79
\end{array}\right) \qquad \left|\begin{array}{cc|c}
7 & 4 & 7 \\
8 & 9 & 4 \\
-6 & -9 & 5
\end{array}\right|$$

$$\begin{pmatrix} 4 & -9 & 4 \\ -9 & 3 & 7 \\ -1 & 7 & 3 \\ -1 & 5 & 3 \end{pmatrix} \quad \begin{pmatrix} -99 & -74 & -36 & -20 & | & -38 \\ 27 & -17 & 18 & -87 & | & 76 \end{pmatrix}$$

$$\begin{pmatrix} 14 & -47 & 34 & -37 & | & 4 \\ 28 & -98 & 76 & 48 & | & 33 \\ -13 & -74 & -29 & -92 & | & 2 \end{pmatrix} \begin{pmatrix} 696 & 837 & 145 & | & -462 \\ 199 & -313 & 594 & | & 706 \end{pmatrix}$$

$$\begin{pmatrix}
-88 & 82 & 28 & -84 \\
-19 & -86 & -34 & -56 \\
-92 & 58 & -77 & 17 \\
-60 & 33 & -51 & 52
\end{pmatrix}$$

$$\begin{pmatrix}
-6 & -8 \\
-2 & -1
\end{pmatrix}$$

$$\left(\begin{array}{cc|c}
2 & -1 & 0 \\
-6 & -3 & -4
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-63 & -48 & -61 & 22 \\
48 & 69 & 49 & 15 \\
-69 & 31 & -64 & -60
\end{array}\right)$$

$$\left(\begin{array}{cc|c}
9 & 4 & 0 \\
-8 & -9 & -7
\end{array}\right) \qquad \left(\begin{array}{cc|c}
4 & -7 & -5 \\
5 & -2 & 0
\end{array}\right)$$

$$\left(\begin{array}{ccc|ccc|c}
0 & 1 & 7 & 6 & 2 & -9 \\
-9 & -1 & 5 & -6 & 4 & 5 \\
5 & -1 & -9 & -9 & -4 & -5
\end{array}\right)
\left(\begin{array}{ccc|ccc|c}
-29 & -24 & 97 \\
54 & 6 & 47
\end{array}\right)$$

$$\begin{pmatrix} 83 & -30 \\ 24 & 49 \\ -9 & -53 \\ 29 & 67 \end{pmatrix} \qquad \begin{pmatrix} 28 & -36 & -54 \\ -87 & -45 & -97 \end{pmatrix}$$

$$\begin{pmatrix} -46 & -77 & 17 & 96 & 77 \\ 49 & 27 & 77 & 21 & -5 \\ -84 & -83 & 87 & -40 & 9 \end{pmatrix} \begin{pmatrix} -2 & 47 & 5 & -43 \\ -89 & -5 & -61 & 79 \end{pmatrix}$$

$$\left(\begin{array}{cccc}
27 & 14 & -67 \\
59 & 11 & 36
\end{array}\right) \qquad \left|\begin{array}{cccc}
13 & -7 \\
-39 & -67
\end{array}\right|$$

$$\begin{pmatrix}
0 & 7 \\
-1 & -4 \\
9 & -6
\end{pmatrix}
\quad
\begin{pmatrix}
26 & -68 & -17 & 58 & 8 & 75 \\
-43 & -55 & -23 & 25 & 94 & -72 \\
13 & 59 & -16 & 50 & 66 & 94
\end{pmatrix}$$

$$\left(\begin{array}{cccc}
2 & 1 & 6 & -5 \\
0 & 2 & 7 & -2
\end{array}\right) \qquad \left|\begin{array}{ccccc}
-76 & 474 & -237 \\
569 & 837 & -490 \\
911 & 541 & -431
\end{array}\right|$$

$$\left( \begin{array}{ccc|c} 5 & 5 & 6 & -3 & 2 \\ -8 & 9 & 6 & -4 & -7 \\ 1 & 0 & 0 & 5 & 0 \end{array} \right) \qquad \left( \begin{array}{ccc|c} 9 & 8 & -9 & 2 \\ -7 & -6 & -4 & 1 \end{array} \right)$$

$$\left(\begin{array}{ccc|c}
5 & -5 & 3 & 6 \\
8 & -7 & 2 & 6
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
6 & 6 & -7 & 5 \\
-6 & 3 & 8 & -7
\end{array}\right)$$

$$\begin{pmatrix} -65 & -92 & 16 & | & -67 \\ 75 & -43 & 81 & | & 5 \\ -44 & -1 & -40 & | & 80 \end{pmatrix} \begin{pmatrix} 85 & -76 & -37 & -42 & -21 & | & 73 \\ 77 & -86 & -29 & -62 & -26 & | & -65 \\ 73 & 49 & 79 & -40 & -63 & | & -2 \end{pmatrix}$$

$$\begin{pmatrix} -44 & -28 & -87 & 25 & 41 & 77 \\ 77 & 66 & -41 & -77 & -80 & 36 \\ -77 & 92 & -30 & -55 & -95 & -98 \\ 43 & 40 & -77 & 88 & 73 & -65 \end{pmatrix} \begin{pmatrix} 36 & -38 & 74 & 30 \\ 53 & -62 & 26 & -60 \\ -26 & -92 & -18 & -10 \\ -94 & 94 & -32 & 97 \end{pmatrix}$$

$$\begin{pmatrix} 8 & 2 \\ -3 & -2 \\ -8 & 4 \\ -6 & 7 \end{pmatrix} \qquad \begin{pmatrix} -1 & 0 & -1 & -5 & 7 & | & -1 \\ 1 & 5 & -5 & 2 & -9 & | & 6 \\ -6 & -1 & -4 & -1 & 8 & | & 5 \\ 4 & 0 & -9 & 7 & -3 & | & 2 \\ 0 & 1 & -6 & -5 & 0 & | & 2 \end{pmatrix}$$

$$\left(\begin{array}{ccccc}
-72 & -61 & 92 & -36 & -61 \\
44 & -95 & 88 & -45 & 26
\end{array}\right) \qquad \left(\begin{array}{cccc}
-18 & 54 \\
61 & 41 \\
-30 & -95
\end{array}\right)$$

$$\begin{pmatrix}
-18 & -33 \\
14 & -8 \\
-12 & 51
\end{pmatrix}$$

$$\begin{vmatrix}
-7 & -6 & 0 & 3 \\
2 & -9 & 9 & 0 \\
5 & -1 & -5 & 2 \\
1 & -5 & 6 & 5
\end{vmatrix}$$

$$\begin{pmatrix}
-82 & -78 & -48 & 87 \\
37 & 56 & -81 & -96 \\
63 & -39 & -42 & -24 \\
-88 & 8 & 84 & -9 \\
-62 & -6 & 32 & 30
\end{pmatrix} \qquad \begin{pmatrix}
-9 & 1 & -1 \\
6 & 2 & 6 \\
3 & -9 & -4 \\
0 & 7 & 5
\end{pmatrix}$$

$$\begin{vmatrix}
-62 & 59 \\
39 & -81
\end{vmatrix}
\qquad
\begin{pmatrix}
80 & -38 & -67 & 20 \\
-72 & 16 & 65 & -46 \\
21 & 45 & -84 & 53
\end{pmatrix}$$

$$\begin{pmatrix}
509 & 198 & 946 \\
-22 & -430 & -245 \\
-561 & -404 & 177 \\
2 & -790 & -315
\end{pmatrix}
\begin{vmatrix}
5 & -9 & 3 \\
3 & -8 & -3 \\
2 & -8 & 4
\end{vmatrix}$$

$$\begin{pmatrix} 99 & 3 & -77 & 82 & 93 & 12 \\ 68 & -38 & 99 & 69 & -49 & -58 \\ -72 & 14 & -92 & 0 & -99 & 49 \end{pmatrix} \begin{pmatrix} 1 & 3 & -7 & -4 \\ 7 & 8 & 9 & -5 \end{pmatrix}$$

$$\left(\begin{array}{ccccc}
-963 & -998 & 847 & -566 & 304 \\
273 & -878 & 638 & 576 & -858
\end{array}\right) \left|\begin{array}{ccccc}
0 & 0 & 6 \\
7 & 8 & -4 \\
-1 & -4 & 3
\end{array}\right|$$

$$\begin{pmatrix}
32 & 59 \\
-95 & 63 \\
16 & 64
\end{pmatrix}
\qquad
\begin{pmatrix}
4 & 3 & 1 & | -8 \\
-3 & 8 & 1 & | -9 \\
-5 & -8 & -9 & | -4
\end{pmatrix}$$

$$\left(\begin{array}{ccc}
-3 & -1 & -7 \\
-4 & 8 & -8
\end{array}\right) \qquad \left(\begin{array}{cccc}
-8 & 8 & -3 \\
1 & -8 & 9 \\
9 & -6 & 3
\end{array}\right)$$

$$\begin{pmatrix}
-8 & -8 & 0 \\
6 & -1 & 3 \\
-1 & 2 & 1
\end{pmatrix}$$

$$\begin{vmatrix}
-9 & 9 \\
-3 & -7
\end{vmatrix}$$

$$\begin{vmatrix} -32 & 83 \\ -17 & -20 \end{vmatrix} \qquad \qquad \begin{pmatrix} 4 & 5 \\ -4 & -1 \end{pmatrix}$$

$$\begin{pmatrix} -35 & 18 & 48 & 24 \\ -89 & -25 & 80 & -53 \\ 67 & 13 & -56 & -28 \end{pmatrix} \qquad \begin{pmatrix} 545 & 38 \\ 256 & 283 \\ 920 & 554 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
18 & 30 & -81 & -73 \\
-36 & -58 & -27 & -70
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-93 & -57 \\
-46 & -50 \\
66 & -55
\end{array}\right)$$

$$\begin{pmatrix} -847 & -538 \\ -581 & -470 \\ -152 & -923 \end{pmatrix} \qquad \begin{pmatrix} -1 & -7 & 3 \\ 5 & -5 & 1 \end{pmatrix}$$

$$\begin{vmatrix}
-2 & -1 & -3 \\
3 & -9 & -1 \\
3 & 9 & 5
\end{vmatrix}
\qquad \left(\begin{array}{cc|c}
-2 & 4 & 0 \\
-2 & 7 & 6
\end{array}\right)$$

$$\left| \begin{array}{ccc|ccc}
-4 & 2 \\
0 & -2
\end{array} \right| \qquad \left( \begin{array}{cccc|cccc}
96 & 18 & 42 & 18 & 73 & -94 \\
84 & 83 & -16 & 85 & -55 & 7
\end{array} \right)$$

$$\begin{pmatrix}
1 & -9 & 6 & 8 \\
7 & -4 & -6 & 3 \\
-6 & 2 & 1 & -2
\end{pmatrix}$$

$$\begin{pmatrix}
727 & 344 & -637 \\
-461 & -761 & -99 \\
-739 & -476 & 508 \\
-331 & 8 & -246 \\
182 & -260 & -120
\end{pmatrix}$$

$$\begin{vmatrix}
54 & 54 & 9 & -39 \\
-55 & -85 & 66 & 4 \\
16 & 95 & -35 & -85 \\
-62 & 87 & -84 & -98
\end{vmatrix}$$

$$\begin{pmatrix}
-8 & -2 \\
8 & 8
\end{pmatrix}$$

$$\begin{pmatrix}
-23 & 29 & 76 & -79 & 56 \\
-71 & -7 & -96 & 1 & 84 \\
2 & 27 & -40 & 8 & 0
\end{pmatrix}
\begin{pmatrix}
4 & 6 & 0 & -1 & 7 & -8 \\
-2 & 3 & 5 & 8 & 2 & -2 \\
9 & -1 & -9 & -6 & 0 & 2
\end{pmatrix}$$

$$\begin{vmatrix}
90 & 58 & -34 \\
-67 & -89 & 14 \\
-20 & -18 & 15
\end{vmatrix}
\qquad \left(\begin{array}{ccc}
3 & 4 & -4 \\
1 & -7 & 5
\end{array}\right)$$

$$\left(\begin{array}{cc|c}
-80 & 5 & 8 \\
31 & -72 & 83
\end{array}\right) \qquad \left|\begin{array}{cc|c}
57 & -48 \\
-3 & -6
\end{array}\right|$$

$$\begin{vmatrix} 79 & -53 & 32 \\ -78 & 58 & 43 \\ -79 & 5 & 47 \end{vmatrix} = \begin{pmatrix} -7 & 8 & 8 & 5 & 7 & 7 \\ -5 & -9 & -3 & 4 & -2 & 2 \\ -5 & -9 & -5 & -5 & 9 & -2 \\ -8 & -8 & 2 & 6 & 9 & 1 \\ -6 & -3 & -4 & -9 & -8 & 3 \end{pmatrix}$$

$$\begin{pmatrix}
-4 & -4 & -4 & 4 & 9 & -3 \\
5 & 8 & 3 & 2 & 2 & -6 \\
-8 & -5 & 2 & 8 & 8 & 5
\end{pmatrix}
\begin{pmatrix}
73 & -29 & -79 \\
-82 & -72 & -73 \\
13 & 47 & 92
\end{pmatrix}$$

$$\left| \begin{array}{ccc|c} -40 & -6 \\ -67 & -35 \end{array} \right| \qquad \left( \begin{array}{ccc|c} 4 & -8 & -3 & 6 \\ 6 & -1 & 9 & 0 \end{array} \right)$$

$$\begin{pmatrix} 76 & -1 & -65 & 14 & 71 & -52 \\ -1 & -67 & -4 & -43 & 34 & -60 \\ -62 & 50 & -44 & -79 & 28 & -82 \\ -38 & 42 & -10 & 80 & 55 & 0 \end{pmatrix} \begin{pmatrix} 1 & 1 & 0 \\ -6 & -3 & 1 \end{pmatrix}$$

$$\left| \begin{array}{ccc}
7 & -4 \\
0 & 3
\end{array} \right| 
\left( \begin{array}{cccc}
-94 & 66 \\
46 & 36 \\
-13 & -13 \\
-91 & 14 \\
9 & 89
\end{array} \right)$$

$$\begin{pmatrix}
-5 & 8 & 5 & 7 & 5 \\
2 & -6 & -9 & 3 & 3 \\
-3 & 7 & -8 & -9 & 9 \\
8 & -3 & 8 & -8 & 3
\end{pmatrix}$$

$$\begin{vmatrix}
9 & -3 & 6 & 8 \\
1 & 8 & -6 & 9 \\
-1 & 6 & 7 & -5 \\
-3 & -1 & -4 & -7
\end{vmatrix}$$

$$\begin{pmatrix} 46 & -54 & 74 & 37 \\ -8 & 30 & -94 & -33 \\ 51 & 18 & 73 & 1 \end{pmatrix} \quad \begin{pmatrix} 88 & 69 & 7 & 98 \\ -81 & 88 & 61 & -12 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c} 67 & -97 & 53 \\ -66 & 54 & 70 \end{array}\right) \left(\begin{array}{ccc|c} 63 & 2 & 96 & -73 & 58 & -96 \\ -73 & 57 & -90 & -52 & 60 & 62 \end{array}\right)$$

$$\begin{vmatrix} 6 & 51 & 63 & 68 \\ -18 & -81 & -71 & -29 \\ 66 & 44 & -41 & 24 \\ -44 & 32 & -35 & -54 \end{vmatrix} \qquad \begin{pmatrix} -3 & 5 & -2 & 7 \\ 8 & -8 & 7 & 7 \\ 7 & 3 & -6 & 1 \end{pmatrix}$$

$$\begin{pmatrix} -6 & -9 \\ -8 & -2 \\ 1 & -9 \end{pmatrix} \qquad \begin{pmatrix} -60 & 37 & 37 & 34 \\ 78 & 87 & 75 & -96 \\ 93 & -34 & 67 & -25 \end{pmatrix}$$

$$\begin{pmatrix}
69 & 9 & 61 & 94 \\
44 & -98 & -5 & -49
\end{pmatrix}$$

$$\begin{vmatrix}
10 & -62 & 54 & 57 \\
-74 & -67 & -42 & 2 \\
78 & -8 & -27 & 25 \\
68 & -50 & 10 & -66
\end{vmatrix}$$

$$\begin{pmatrix}
80 & -46 & -34 & | & 61 \\
-52 & -37 & -6 & | & -8 \\
-9 & -77 & -97 & | & 15
\end{pmatrix}$$

$$\begin{vmatrix}
8 & 8 \\
-6 & -9
\end{vmatrix}$$

$$\left(\begin{array}{cc|c}
-6 & 3 & 7 \\
-7 & -4 & 1
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-9 & -8 & -9 & -1 \\
8 & -4 & -8 & -7 \\
-3 & -1 & 1 & 9
\end{array}\right)$$

$$\begin{pmatrix} 7 & -1 & -5 & 8 \\ 6 & -1 & -3 & -3 \\ 7 & -2 & -9 & 4 \end{pmatrix} \begin{pmatrix} 48 & -83 & 72 & -37 & 58 & | & -99 \\ 40 & -41 & 31 & 56 & -41 & 42 \\ -88 & 76 & 57 & 56 & -13 & 26 \\ -57 & -3 & -95 & -67 & -3 & -33 \\ -61 & 55 & 57 & 9 & -48 & 71 \end{pmatrix}$$

$$\begin{pmatrix} 95 & -69 & -45 \\ 1 & 96 & 48 \\ 10 & 0 & 66 \\ 1 & 59 & 61 \end{pmatrix} \begin{pmatrix} -29 & 69 & -16 & 68 & 29 \\ 17 & 29 & 2 & 44 & 18 \\ -12 & -68 & -31 & 2 & -21 \end{pmatrix}$$

$$\begin{pmatrix} -53 & -95 \\ -66 & -27 \\ 90 & 28 \\ -50 & -41 \\ 91 & 44 \end{pmatrix} \qquad \begin{pmatrix} -5 & 9 & 1 & 6 & 8 \\ -7 & -2 & -6 & -4 & 6 \\ -1 & -2 & -8 & -2 & -1 \\ 1 & -8 & -7 & -9 & 0 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
6 & -3 & 3 & 9 \\
-1 & 0 & -3 & -3 \\
3 & 0 & 3 & 5
\end{array}\right) \qquad \left|\begin{array}{cccc|c}
2 & -3 & -3 & -5 \\
0 & 6 & 0 & 4 \\
-7 & 2 & 8 & 6 \\
3 & 9 & 6 & 9
\end{array}\right|$$

$$\begin{pmatrix} -80 & 31 & -73 & 3 & 1 & | & -59 \\ 22 & -11 & -25 & 13 & -30 & | & -98 \\ -62 & 77 & 59 & 16 & -76 & | & 47 \\ 8 & 34 & -29 & -4 & -8 & | & 90 \end{pmatrix} \begin{pmatrix} 6 & -2 & 6 & 8 & | & -4 \\ 9 & -6 & 3 & 8 & | & -7 \end{pmatrix}$$

$$\begin{vmatrix} -1 & 0 & -4 & 8 \\ 8 & 9 & 0 & 6 \\ -9 & 4 & -7 & 9 \\ -5 & -7 & 8 & 8 \end{vmatrix} \begin{pmatrix} -60 & -16 & 1 & 43 & -15 & 87 \\ -12 & 41 & -67 & -85 & -58 & 25 \\ 59 & 52 & -50 & 74 & -87 & 29 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
1 & 6 & 5 \\
-3 & -4 & 7
\end{array}\right) \qquad \left(\begin{array}{cccc|c}
4 & -6 & -1 & -4 & 9 & 3 \\
-3 & -6 & 5 & 3 & -3 & -8 \\
-5 & -1 & -7 & 0 & -8 & 2
\end{array}\right)$$

$$\begin{vmatrix}
-5 & 9 & 1 \\
5 & 2 & 2 \\
-5 & -6 & 5
\end{vmatrix} \qquad \begin{pmatrix}
-83 & 76 & -6 \\
23 & -73 & 21 \\
37 & -4 & 17 \\
-87 & -49 & -10
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
-53 & 76 & 16 & -60 & 22 \\
-18 & 47 & 84 & 58 & -47
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-3 & -2 \\
0 & -6 \\
4 & 2
\end{array}\right)$$

$$\left(\begin{array}{cc}
-2 & -5 \\
5 & -5
\end{array}\right) \qquad \left|\begin{array}{cc}
6 & 9 \\
-7 & -7
\end{array}\right|$$

$$\begin{vmatrix}
80 & -76 \\
97 & -26
\end{vmatrix} \qquad \left(\begin{array}{ccccc}
-2 & 6 & 1 & -7 & 0 \\
2 & -1 & 1 & 0 & 3
\end{array}\right)$$

$$\begin{pmatrix}
266 & -48 & | & 453 \\
-559 & 531 & | & 300
\end{pmatrix}
\begin{pmatrix}
210 & 317 & -483 & -540 \\
543 & -961 & -5 & 677 \\
776 & 528 & 176 & -456 \\
448 & 299 & 725 & 916
\end{pmatrix}$$

$$\begin{pmatrix}
2 & 7 & -7 & -7 & 4 \\
-6 & 2 & -4 & -5 & -1 \\
7 & 8 & 0 & -8 & -1 \\
-9 & -9 & -5 & 0 & 7
\end{pmatrix}$$

$$\begin{pmatrix}
-2 & -8 \\
3 & 9 \\
-5 & 6
\end{pmatrix}$$

$$\left( \begin{array}{ccc|c} 18 & 6 & -72 \\ -9 & -51 & 49 \end{array} \right) \quad \left( \begin{array}{ccc|c} -60 & 69 & 14 & 85 & 95 \\ -74 & 4 & -72 & 41 & -11 \end{array} \right)$$

$$\begin{pmatrix}
9 & 6 & 8 \\
-6 & -3 & -9 \\
1 & 8 & -6 \\
1 & -3 & -6
\end{pmatrix}$$

$$\begin{vmatrix}
47 & 83 & -77 & -6 \\
26 & -45 & -63 & -4 \\
-19 & -57 & 87 & 45 \\
30 & 81 & 52 & -36
\end{vmatrix}$$

$$\begin{pmatrix}
756 & 289 & -528 & -471 \\
-730 & -267 & 987 & 53 \\
585 & -116 & -214 & -78
\end{pmatrix}
\begin{vmatrix}
-16 & -5 & -45 & -55 \\
-65 & 38 & 21 & -55 \\
-67 & 83 & -64 & 56 \\
-50 & 49 & 75 & -52
\end{vmatrix}$$

$$\begin{vmatrix}
-8 & 4 \\
-8 & -4
\end{vmatrix} = \begin{pmatrix}
29 & -7 & 82 & -27 & -66 \\
65 & 10 & -72 & 87 & -23 \\
29 & 42 & 92 & -33 & 97 \\
70 & -37 & -10 & 5 & 89
\end{pmatrix}$$

$$\begin{vmatrix}
-35 & 59 & 94 & 15 \\
52 & 72 & -2 & -76 \\
93 & -24 & -23 & 34 \\
-60 & -34 & -48 & 24
\end{vmatrix}$$

$$\begin{vmatrix}
58 & -51 & 12 \\
59 & -80 & -51 \\
31 & 51 & 69
\end{vmatrix}$$

$$\begin{pmatrix}
-7 & -6 & | & -6 \\
-8 & 0 & | & -1
\end{pmatrix} \qquad \qquad \begin{pmatrix}
93 & 14 & 12 & | & -77 \\
7 & 57 & -49 & | & 87
\end{pmatrix}$$

$$\begin{pmatrix}
1 & -1 & -2 \\
-8 & -2 & -4 \\
6 & -9 & 0 \\
-9 & -7 & 2
\end{pmatrix}
\qquad
\begin{pmatrix}
-97 & 56 & | & 49 \\
-97 & 75 & | & -80
\end{pmatrix}$$

$$\begin{pmatrix} 52 & -74 & -87 & 58 & | & -36 \\ -5 & 16 & 42 & -46 & | & -90 \\ -42 & 56 & -77 & 10 & | & 92 \\ -84 & 71 & 46 & -34 & | & -87 \end{pmatrix} \begin{pmatrix} 48 & 97 & | & 36 \\ -49 & 86 & | & 9 \end{pmatrix}$$

$$\begin{vmatrix} 19 & 59 & 1 & 90 \\ 53 & -48 & 39 & 53 \\ 61 & 60 & 64 & -42 \\ -87 & -39 & 71 & 58 \end{vmatrix} \qquad \begin{pmatrix} -26 & 19 & 17 \\ 70 & -66 & -86 \\ -75 & -87 & 41 \end{pmatrix}$$

$$\begin{pmatrix} -4 & -6 \\ -5 & 3 \\ 6 & -1 \end{pmatrix} \qquad \begin{pmatrix} 804 & -432 \\ 695 & -807 \\ 995 & -504 \end{pmatrix}$$

$$\begin{pmatrix}
62 & -82 & -48 & 92 \\
12 & -1 & 5 & -80
\end{pmatrix}
\begin{pmatrix}
-127 & 493 & -126 \\
729 & -48 & 879 \\
205 & 772 & 624 \\
102 & 995 & 810
\end{pmatrix}$$

$$\left(\begin{array}{cccc}
-86 & 79 & 25 & -91 \\
-15 & -10 & 5 & 94
\end{array}\right) \qquad \left|\begin{array}{ccccc}
-65 & -35 & 26 \\
40 & 28 & -90 \\
34 & 53 & -93
\end{array}\right|$$

$$\left(\begin{array}{cc|c}
-5 & -2 & 8 \\
-6 & -5 & -3
\end{array}\right) \qquad \left|\begin{array}{cc|c}
-1 & -3 & 9 \\
-7 & -9 & 8 \\
-8 & -5 & 1
\end{array}\right|$$

$$\begin{pmatrix} -80 & 27 & -36 & -19 & 67 & 53 \\ 10 & 72 & -43 & -27 & -32 & 62 \\ 98 & 87 & -7 & -36 & -41 & -75 \end{pmatrix} \begin{pmatrix} -52 & 29 & 62 & -54 \\ -17 & -24 & -69 & -29 \end{pmatrix}$$

$$\begin{vmatrix}
-78 & 64 \\
29 & -20
\end{vmatrix}$$

$$\begin{pmatrix}
-86 & -63 \\
-55 & -87 \\
-12 & -3
\end{pmatrix}$$

$$\begin{vmatrix}
 94 & 73 \\
 -77 & 29
 \end{vmatrix}
 \begin{vmatrix}
 8 & -9 & 5 \\
 -4 & 1 & -1 \\
 1 & 7 & 8
 \end{vmatrix}$$

$$\left(\begin{array}{cc|c}
-7 & -1 & 6 \\
9 & 8 & -4
\end{array}\right) \qquad \left(\begin{array}{cc|c}
5 & 7 \\
-8 & 2 \\
-9 & -1 \\
6 & -1 \\
-4 & 0
\end{array}\right)$$

$$\begin{pmatrix} -78 & 220 \\ -233 & 716 \\ 302 & -700 \end{pmatrix} \qquad \begin{pmatrix} 3 & -2 \\ -5 & -1 \end{pmatrix}$$

$$\begin{pmatrix} -9 & 9 \\ 0 & -2 \\ 7 & 5 \\ 1 & 3 \\ -5 & 2 \end{pmatrix} \qquad \begin{pmatrix} -87 & -23 & 38 \\ 55 & -17 & -56 \end{pmatrix}$$

$$\begin{pmatrix} -90 & 99 & -4 & 5 & -50 & 79 \\ 91 & 50 & 81 & -76 & -55 & -93 \\ -24 & -42 & -56 & 52 & 6 & 8 \\ -94 & -12 & 97 & -2 & -93 & 19 \\ -26 & -99 & 65 & -69 & -7 & -81 \end{pmatrix} \begin{pmatrix} -57 & 17 & 13 & 70 & -79 \\ -79 & 40 & 63 & 87 & -79 & 40 & 63 & 87 & -79 \\ 96 & 27 & -6 & 34 & -79 & -$$

$$\left(\begin{array}{cccc}
-1 & -7 & 8 \\
7 & 8 & 6
\end{array}\right) \qquad \left(\begin{array}{ccccc}
72 & 27 & -93 & 68 \\
54 & 51 & -61 & 78 \\
-87 & -76 & 53 & 77
\end{array}\right)$$

$$\left(\begin{array}{ccc|c} -6 & 8 & -7 & -5 & -3 \\ -7 & -2 & -6 & 4 & 3 \end{array}\right) \left(\begin{array}{ccc|c} 48 & 55 & 95 & -94 \\ -60 & -37 & -8 & -7 \end{array}\right)$$

$$\begin{pmatrix}
5 & 5 \\
2 & -1 \\
2 & -8 \\
3 & -5
\end{pmatrix}
\qquad
\begin{vmatrix}
-15 & 14 \\
-66 & -44
\end{vmatrix}$$

$$\begin{pmatrix}
697 & -475 & -489 & | & 169 \\
346 & -763 & -672 & | & -617 \\
678 & 720 & -166 & | & 991
\end{pmatrix}$$

$$\begin{pmatrix}
-41 & 34 \\
68 & -69
\end{pmatrix}$$

$$\begin{vmatrix} 73 & 56 & -63 \\ -88 & 46 & 75 \\ -79 & -41 & -13 \end{vmatrix} \begin{pmatrix} -33 & -44 & -95 & -87 & -40 & | & -38 \\ 51 & -73 & -79 & 79 & 88 & | & -25 \end{pmatrix}$$

$$\begin{vmatrix}
 -3 & 9 & -8 \\
 8 & 3 & 3 \\
 7 & -2 & 4
 \end{vmatrix}$$

$$\begin{pmatrix}
 8 & -82 \\
 -40 & -59 \\
 -70 & 41
 \end{pmatrix}$$

$$\left(\begin{array}{cc|c}
6 & -61 & -58 \\
43 & 89 & -35
\end{array}\right) \qquad \left(\begin{array}{cc|c}
3 & 8 & 1 \\
-3 & 9 & -2 \\
6 & 8 & 6
\end{array}\right)$$

$$\begin{pmatrix} -59 & 53 & 61 & -15 \\ -75 & -40 & 50 & -22 \\ -3 & -84 & 71 & -34 \end{pmatrix} \qquad \begin{vmatrix} -5 & -8 \\ 8 & -7 \end{vmatrix}$$

$$\begin{vmatrix} -719 & -735 & -293 & -44 \\ -676 & -605 & 444 & 161 \\ -158 & 195 & 302 & 157 \\ -206 & 869 & -744 & 207 \end{vmatrix} \begin{pmatrix} -21 & 18 & 88 & 6 \\ -42 & -91 & -68 & -47 \end{pmatrix}$$

$$\begin{vmatrix}
 5 & -5 \\
 5 & 8
 \end{vmatrix}
 \begin{vmatrix}
 -3 & 3 & 6 \\
 -6 & 8 & 9 \\
 -5 & -2 & 3
 \end{vmatrix}$$

$$\begin{pmatrix} -2 & 2 & -8 \\ 5 & -9 & 9 \\ -2 & 9 & 2 \\ -7 & -6 & -8 \\ -6 & 6 & -6 \end{pmatrix} \qquad \begin{pmatrix} 2 & 8 & 8 & 4 \\ -4 & -1 & 9 & 7 \end{pmatrix}$$

$$\begin{vmatrix}
87 & 4 & -70 & -43 \\
95 & -73 & -55 & 55 \\
5 & -4 & -26 & 36 \\
51 & 9 & -20 & -11
\end{vmatrix}$$

$$\begin{pmatrix}
-46 & -54 & 27 \\
-88 & -46 & -76
\end{pmatrix}$$

$$\left(\begin{array}{ccc}
90 & -97 \\
-31 & -43
\end{array}\right) \qquad \left|\begin{array}{ccc}
31 & -10 \\
-43 & 64
\end{array}\right|$$

$$\begin{pmatrix}
9 & 6 \\
-7 & 1 \\
0 & -1
\end{pmatrix}
\qquad
\begin{pmatrix}
22 & -21 & -76 & 52 & -37 \\
74 & -94 & -69 & 77 & 0
\end{pmatrix}$$

$$\begin{vmatrix}
-8 & 5 & 1 & -5 \\
-4 & 3 & 2 & 5 \\
-8 & -4 & -5 & -1 \\
-1 & -1 & -9 & 0
\end{vmatrix}$$

$$\begin{vmatrix}
-63 & 62 & 67 \\
-72 & 29 & 15 \\
-91 & 22 & 6
\end{vmatrix}$$

$$\begin{pmatrix}
-9 & 3 & 5 & | & -2 \\
-1 & 4 & 9 & | & 7 \\
9 & -2 & 1 & | & -5
\end{pmatrix}$$

$$\begin{pmatrix}
-2 & 2 & -1 \\
-3 & 7 & 4
\end{pmatrix}$$

$$\begin{vmatrix} -2 & 3 & -7 & 1 \\ 3 & 5 & -6 & -4 \\ 0 & 5 & -6 & 2 \\ -2 & 0 & -2 & 2 \end{vmatrix} \begin{pmatrix} -99 & -22 & 21 & -56 & -5 \\ -53 & 96 & 91 & -92 & -16 \\ 68 & -16 & -48 & -68 & 13 \end{pmatrix}$$

$$\left(\begin{array}{cc|c}
2 & -9 & 8 & -7 \\
-7 & 9 & 4 & -7
\end{array}\right) \qquad \left|\begin{array}{cc|c}
-2 & -9 & \\
-8 & -2 & -7
\end{array}\right|$$

$$\begin{pmatrix}
64 & 47 \\
95 & -92 \\
96 & -7
\end{pmatrix}$$

$$\begin{vmatrix}
2 & -3 & 0 \\
-1 & -6 & -8 \\
9 & 1 & -6
\end{vmatrix}$$

$$\begin{vmatrix}
3 & 0 & 1 \\
-1 & 8 & 9 \\
-8 & -6 & 4
\end{vmatrix}$$

$$\begin{pmatrix}
4 & -3 \\
-1 & 1 \\
1 & 0 \\
-9 & -8
\end{pmatrix}$$

$$\begin{vmatrix}
9 & 8 & 3 \\
-5 & 5 & -4 \\
-5 & -2 & -2
\end{vmatrix}
\qquad \left(\begin{array}{cc|c}
42 & -31 & 5 \\
96 & 71 & -11
\end{array}\right)$$

$$\begin{pmatrix}
-7 & 9 & 0 \\
-6 & 8 & 9
\end{pmatrix}$$

$$\begin{vmatrix}
-69 & -90 & 24 & 60 \\
-80 & -99 & -27 & 22 \\
-66 & -49 & 0 & -4 \\
-54 & 23 & -76 & -40
\end{vmatrix}$$

$$\begin{vmatrix}
-4 & -5 & 3 & -7 \\
2 & 3 & 8 & 0 \\
-6 & 1 & 2 & -4 \\
-4 & -4 & -5 & 6
\end{vmatrix}$$

$$\begin{pmatrix}
-3 & 3 & 0 \\
4 & -7 & -8 \\
6 & 4 & -8 \\
-9 & 2 & -6 \\
6 & 2 & 9
\end{pmatrix}$$

$$\begin{pmatrix}
1 & 4 & 6 & -2 & 7 \\
-2 & 4 & -2 & 0 & -3 \\
0 & -8 & -1 & -9 & -6 \\
-5 & 1 & -1 & -9 & 2
\end{pmatrix}$$

$$\begin{pmatrix}
53 & 19 \\
-94 & -70
\end{pmatrix}$$

$$\begin{pmatrix} -5 & 9 & -4 \\ -2 & -4 & -9 \\ 0 & -3 & 6 \\ -4 & -6 & -5 \end{pmatrix} \qquad \begin{pmatrix} -15 & -90 \\ -73 & 9 \\ -7 & -61 \end{pmatrix}$$

$$\begin{pmatrix} 9 & 53 & -80 & 86 & -96 & -89 \\ 52 & 95 & -40 & -11 & 31 & -2 \\ 44 & 88 & 11 & 22 & -50 & 17 \\ 47 & -3 & 44 & 34 & 5 & 25 \end{pmatrix} \begin{pmatrix} 6 & -1 & -8 \\ -8 & -3 & -1 \end{pmatrix}$$

$$\left( \begin{array}{cc|c} -33 & -75 & 41 & 95 \\ 15 & 16 & 89 & -24 \end{array} \right) \qquad \left( \begin{array}{cc|c} -17 & 30 & -28 \\ 39 & 40 & 20 \end{array} \right)$$

$$\begin{pmatrix}
0 & -2 & 2 \\
-3 & -8 & 2 \\
-6 & -5 & -2
\end{pmatrix}$$

$$\begin{pmatrix}
-9 & -7 \\
7 & 6
\end{pmatrix}$$

$$\begin{vmatrix} 3 & 1 & 3 & -6 \\ -9 & 6 & -3 & -3 \\ 7 & -2 & -5 & 3 \\ 6 & 9 & -3 & 0 \end{vmatrix} \begin{pmatrix} 476 & -921 & -28 & 468 & 711 \\ -751 & -77 & -214 & 817 & 624 \\ -392 & -642 & 729 & -172 & -932 \\ -827 & 811 & -553 & 31 & -187 \end{pmatrix}$$

$$\left(\begin{array}{cc|c}
17 & 72 & -50 \\
-26 & 55 & 90
\end{array}\right) \qquad \left(\begin{array}{cc|c}
7 & 8 & 4 \\
5 & 8 & -2
\end{array}\right)$$

$$\begin{pmatrix}
8 & 6 & 4 \\
-2 & -3 & -7 \\
7 & -7 & -9 \\
1 & 1 & -7
\end{pmatrix}
\qquad
\begin{pmatrix}
2 & 800 & | -268 \\
-842 & -758 & | 898
\end{pmatrix}$$

$$\begin{pmatrix} 7 & -7 & -4 & -6 & | & -8 \\ 1 & 5 & -3 & -7 & | & 3 \end{pmatrix} \begin{pmatrix} -299 & -915 & 471 & 338 & -766 \\ 486 & -815 & 850 & 990 & 610 \\ -935 & -651 & -866 & -334 & -108 \\ 708 & 7 & 802 & 64 & -660 \end{pmatrix}$$

$$\left(\begin{array}{ccccc} 2 & 1 & -5 & -1 \\ 2 & -1 & -2 & -2 \end{array}\right) \left(\begin{array}{ccccc} -96 & -28 & -5 & 89 & 8 \\ 60 & 7 & -26 & 62 & 25 \\ 9 & -91 & 87 & -75 & 36 \end{array}\right)$$

$$\begin{pmatrix} -7 & 7 & -1 & 9 \\ -3 & 7 & 3 & -4 \\ 2 & -3 & -3 & 6 \\ -3 & -9 & 4 & -4 \end{pmatrix} \qquad \begin{pmatrix} -6 & -9 & 9 \\ 6 & 3 & 6 \\ 0 & 1 & 1 \\ 2 & -9 & -1 \\ 2 & -9 & 9 \end{pmatrix}$$

$$\begin{pmatrix} -46 & -17 & -73 & 64 & 29 \\ -62 & 73 & -4 & -33 & 85 \\ 87 & -85 & -37 & -36 & -6 \end{pmatrix} \qquad \begin{vmatrix} -37 & -95 \\ 89 & 69 \end{vmatrix}$$

$$\begin{bmatrix}
 2 & 4 & -2 & 3 \\
 1 & 6 & 6 & 0 \\
 -9 & -9 & 4 & 9 \\
 3 & -2 & -7 & 7
 \end{bmatrix}$$

$$\begin{pmatrix}
 18 & -51 \\
 -29 & -30
 \end{pmatrix}$$

$$\begin{vmatrix} 3 & -5 & -6 & 0 \\ -9 & 0 & 8 & -9 \\ -9 & -3 & 4 & 6 \\ -4 & 2 & 9 & -3 \end{vmatrix} \qquad \begin{pmatrix} 82 & 25 \\ -68 & -61 \end{pmatrix}$$

$$\begin{pmatrix}
-9 & -2 & -3 & 9 & 3 \\
-8 & 4 & 6 & 3 & 7 \\
-1 & -3 & -8 & -9 & -8 \\
-5 & 0 & 1 & -8 & -1
\end{pmatrix}$$

$$\begin{pmatrix}
-1 & 3 \\
-5 & -7
\end{pmatrix}$$

$$\left(\begin{array}{ccc}
-5 & 6 & -1 \\
5 & 4 & 3
\end{array}\right) \qquad \left(\begin{array}{ccc}
8 & -4 \\
2 & 9
\end{array}\right)$$

$$\begin{pmatrix} 82 & -71 & 84 & -81 & 25 \\ -7 & 61 & 44 & -56 & -43 \\ -9 & -80 & -67 & -96 & 9 \\ -10 & -53 & -80 & -86 & -44 \end{pmatrix} \begin{pmatrix} -1 & 6 & -4 & 6 & -5 & 9 \\ -8 & 3 & 9 & 2 & 9 & -6 \\ 1 & 9 & 0 & -5 & 9 & 1 \end{pmatrix}$$

$$\begin{pmatrix}
40 & 12 & | & 11 \\
-94 & -27 & | & 27
\end{pmatrix}
\begin{pmatrix}
42 & -28 & 74 & -61 \\
-77 & 81 & 35 & -8 \\
60 & 91 & 40 & -28 \\
74 & -70 & -93 & 78
\end{pmatrix}$$

$$\begin{pmatrix}
43 & -12 & 75 & -57 \\
-26 & -98 & 64 & -81
\end{pmatrix}
\qquad
\begin{pmatrix}
-4 & 0 & 1 \\
4 & -8 & 2
\end{pmatrix}$$

$$\left(\begin{array}{cccc}
25 & 23 & -59 \\
-60 & 84 & 62
\end{array}\right) \qquad \left(\begin{array}{ccccc}
-5 & 0 & -7 & 4 & 3 \\
3 & -9 & 1 & 5 & 4
\end{array}\right)$$

$$\begin{vmatrix}
7 & -9 & 8 & 3 \\
-8 & -3 & -1 & 0 \\
-9 & 6 & 1 & 7 \\
-6 & -4 & 3 & 7
\end{vmatrix}$$

$$\begin{vmatrix}
-9 & -6 \\
9 & 2
\end{vmatrix}$$

$$\begin{pmatrix} 86 & -5 \\ -49 & -37 \\ 49 & -2 \end{pmatrix} \qquad \begin{pmatrix} -360 & -914 & | & -737 \\ -696 & -870 & | & 204 \end{pmatrix}$$

$$\begin{pmatrix}
9 & 8 & -7 & -6 & | & -9 \\
-5 & -3 & -3 & -9 & | & 2 \\
9 & 2 & 2 & 1 & | & 3
\end{pmatrix} \qquad
\begin{pmatrix}
3 & 4 & 4 & 0 \\
3 & 0 & -4 & -1
\end{pmatrix}$$

$$\begin{vmatrix}
-90 & -96 \\
-41 & -51
\end{vmatrix}$$

$$\begin{vmatrix}
58 & -67 & -19 \\
94 & 7 & 16 \\
-25 & 14 & -7
\end{vmatrix}$$

$$\begin{pmatrix} -23 & -34 \\ 5 & 67 \\ 51 & 40 \\ -93 & 78 \end{pmatrix} \qquad \begin{pmatrix} -6 & -6 & 3 \\ 7 & 0 & -1 \end{pmatrix}$$

$$\begin{pmatrix} -87 & 45 & -2 \\ -74 & -71 & 70 \\ -29 & -49 & 59 \end{pmatrix} \begin{pmatrix} 37 & -77 & 11 & 40 & -77 & -21 \\ 56 & 28 & -21 & -1 & -6 & 43 \\ 57 & 17 & 41 & 14 & 13 & 21 \\ 75 & -66 & 57 & -57 & -65 & -6 \end{pmatrix}$$

$$\begin{pmatrix}
9 & 6 & 5 & 5 \\
7 & -2 & -7 & -4
\end{pmatrix}
\begin{pmatrix}
48 & 62 & -37 & 38 & -48 \\
-99 & -52 & -28 & -52 & 11 \\
-61 & 83 & -4 & 87 & 97 \\
-16 & 15 & -73 & 75 & -34
\end{pmatrix}$$

$$\begin{pmatrix}
1 & 2 & 8 & -4 \\
4 & -1 & -6 & -1 \\
0 & -6 & -2 & 9
\end{pmatrix}$$

$$\begin{pmatrix}
16 & 38 & | -58 \\
98 & -79 & | -11
\end{pmatrix}$$

$$\left(\begin{array}{ccccc}
6 & 2 & -2 & 0 \\
-9 & 7 & 5 & 5
\end{array}\right) \quad \left(\begin{array}{ccccccc}
-92 & 0 & 76 & 54 & 93 \\
-44 & -66 & 52 & -94 & -10 \\
26 & 4 & 69 & 27 & -76
\end{array}\right)$$

$$\left(\begin{array}{cccc}
-5 & 9 & 6 & -9 & 1 \\
-9 & -7 & -2 & -8 & 3
\end{array}\right) \qquad \left|\begin{array}{cccc}
2 & -9 \\
-4 & 2
\end{array}\right|$$

$$\begin{pmatrix}
88 & -76 & | & 81 \\
-24 & -50 & | & 47
\end{pmatrix}$$

$$\begin{pmatrix}
-98 & -4 \\
-3 & -93
\end{pmatrix}$$

$$\left(\begin{array}{cc|c}
50 & 22 & -73 \\
0 & 41 & 92
\end{array}\right) \qquad \left(\begin{array}{cc|c}
51 & -23 & 64 & 30 \\
45 & 62 & 8 & -32 \\
24 & -32 & -45 & -83
\end{array}\right)$$

$$\left(\begin{array}{ccc}
1 & 7 \\
-1 & 7 \\
2 & 4
\end{array}\right) \qquad \left|\begin{array}{cccc}
8 & 2 & -3 \\
-2 & -9 & 6 \\
-1 & 7 & -4
\end{array}\right|$$

$$\begin{pmatrix} 44 & 77 & -82 & -81 \\ -15 & -89 & 66 & 7 \\ 95 & 50 & 92 & 16 \end{pmatrix} \begin{pmatrix} -742 & 470 & -567 & -4 & 279 \\ -969 & -868 & -22 & 545 & -870 \\ 459 & -604 & 732 & 99 & -977 \\ -460 & -803 & 762 & -409 & -921 \end{pmatrix}$$

$$\begin{pmatrix} 2 & 2 \\ -4 & -6 \\ 5 & -7 \\ -7 & -3 \end{pmatrix} \qquad \begin{pmatrix} -8 & -2 \\ 8 & 8 \\ 1 & -6 \\ -7 & 1 \\ -6 & 3 \end{pmatrix}$$

$$\begin{pmatrix} -42 & 65 & 95 & -34 & -88 \\ 47 & 30 & 40 & 21 & -96 \\ -88 & 16 & -13 & -72 & 22 \\ -58 & 35 & -74 & 8 & -11 \end{pmatrix} \begin{pmatrix} -82 & -65 & -77 & -37 \\ -30 & -5 & 37 & 23 \\ 90 & -68 & 95 & -19 \end{pmatrix}$$

$$\begin{pmatrix}
-9 & -8 & 5 & -9 & -7 & 0 \\
2 & -1 & -1 & 2 & -3 & -2 \\
-9 & -3 & 8 & 1 & 2 & -2
\end{pmatrix}$$

$$\begin{pmatrix}
6 & -9 \\
7 & 6 \\
-4 & -9 \\
5 & -8
\end{pmatrix}$$

$$\left(\begin{array}{cccc}
14 & -36 \\
-58 & 19
\end{array}\right)
\left|\begin{array}{cccccc}
-4 & -8 & 5 & -1 \\
-8 & -8 & 3 & 0 \\
-4 & -5 & 7 & 9 \\
0 & 7 & -5 & 0
\end{array}\right|$$

$$\begin{pmatrix} -83 & 22 & 11 & 56 & 28 & | & -56 \\ -8 & -90 & 49 & -46 & -62 & | & 37 \\ 25 & 83 & -28 & -96 & -86 & | & 69 \end{pmatrix} \begin{pmatrix} -9 & 6 & 4 & 9 & | & 4 \\ 5 & 9 & -3 & 7 & | & 7 \\ 1 & 4 & -9 & 1 & | & 6 \end{pmatrix}$$

$$\begin{pmatrix}
50 & -11 & 82 & | & 4 \\
-71 & 14 & 85 & | & 36
\end{pmatrix}$$

$$\begin{pmatrix}
2 & -1 & 1 \\
-4 & 4 & -2 \\
-7 & -6 & -7 \\
-2 & 6 & -8 \\
-1 & 8 & 4
\end{pmatrix}$$

$$\left(\begin{array}{ccc}
49 & -99 \\
-14 & 76
\end{array}\right) \qquad \left|\begin{array}{cccc}
52 & 14 & 87 \\
42 & 6 & 43 \\
-89 & -8 & -93
\end{array}\right|$$

$$\begin{vmatrix}
-19 & -23 \\
40 & 35
\end{vmatrix}$$

$$\begin{vmatrix}
-7 & 5 & 8 & -6 \\
-8 & -5 & -3 & 9 \\
-5 & 7 & 7 & 4 \\
6 & 3 & -7 & 3
\end{vmatrix}$$

$$\begin{pmatrix}
-37 & 67 & -77 & -81 & -59 \\
74 & -36 & 50 & 44 & -38 \\
-34 & -28 & 88 & -35 & 52
\end{pmatrix}
\qquad
\begin{pmatrix}
-3 & -3 \\
-9 & 7 \\
4 & -5 \\
6 & 8 \\
-3 & 0
\end{pmatrix}$$

$$\begin{vmatrix} 48 & 46 & -4 & 63 \\ -71 & 51 & -59 & -47 \\ 21 & 55 & -82 & 95 \\ 48 & 40 & 49 & -32 \end{vmatrix} \qquad \begin{pmatrix} 81 & 65 & 13 \\ 70 & 64 & 97 \\ -57 & -54 & -5 \end{pmatrix}$$

$$\begin{pmatrix}
6 & -9 & 9 & -2 & -7 \\
7 & -9 & -9 & 3 & 4 \\
-4 & 0 & 1 & -4 & -3
\end{pmatrix}
\begin{pmatrix}
-18 & 1 & -53 \\
42 & 21 & -27 \\
-85 & -45 & -9
\end{pmatrix}$$

$$\begin{pmatrix} 7 & -6 \\ 6 & -9 \end{pmatrix} \qquad \begin{pmatrix} 40 & -98 \\ 7 & -64 \\ -53 & -81 \\ -69 & 40 \\ -30 & -27 \end{pmatrix}$$

$$\begin{pmatrix}
6 & -8 & -1 & -4 & -8 \\
5 & 8 & 1 & -7 & 6 \\
7 & -8 & -3 & -3 & -3 \\
6 & -8 & 5 & -3 & 0
\end{pmatrix}$$

$$\begin{pmatrix}
0 & -1 & -9 & 1 \\
1 & 5 & 1 & 8 \\
-4 & -2 & 9 & 1 \\
-8 & 2 & 5 & 3 \\
-9 & 7 & 1 & 9
\end{pmatrix}$$

$$\begin{pmatrix}
3 & -1 & -5 & -5 \\
-3 & -3 & 8 & 2
\end{pmatrix}$$

$$\begin{pmatrix}
75 & 72 \\
-86 & 8 \\
19 & -69 \\
-20 & -42
\end{pmatrix}$$

$$\begin{pmatrix} -3 & -57 \\ -58 & 59 \\ -12 & -19 \\ 81 & 21 \end{pmatrix} \qquad \begin{vmatrix} -14 & 93 \\ 36 & -65 \end{vmatrix}$$

$$\begin{pmatrix} -7 & 9 & 4 \\ 7 & -3 & 3 \\ 4 & 9 & -1 \end{pmatrix} \begin{pmatrix} 3 & 6 & 8 & -9 & -3 & -1 \\ -1 & -3 & -2 & 3 & 5 & -8 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
9 & -1 & -8 & 4 \\
-9 & 5 & 1 & 7
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
-74 & 16 \\
-95 & -81
\end{array}\right|$$

$$\begin{pmatrix}
564 & 736 \\
862 & -757 \\
855 & 864
\end{pmatrix}
\qquad
\begin{pmatrix}
6 & -9 & 5 & 0 & -9 \\
-1 & -3 & -1 & -5 & -5 \\
-7 & -9 & -5 & -3 & -7 \\
-7 & 4 & -4 & 0 & -2
\end{pmatrix}$$

$$\begin{pmatrix}
-7 & -4 & 7 & -7 & 5 \\
1 & -6 & 9 & 6 & 7 \\
-8 & 7 & 0 & 3 & 1
\end{pmatrix}$$

$$\begin{pmatrix}
-727 & 673 \\
132 & -551
\end{pmatrix}$$

$$\begin{pmatrix}
6 & 7 & -5 & -2 & | & -5 \\
-2 & -7 & -5 & 0 & | & -5 \\
1 & 3 & 8 & 4 & | & 4 \\
-1 & -6 & 4 & -4 & | & 4
\end{pmatrix}$$

$$\begin{pmatrix}
58 & -88 \\
65 & 12
\end{pmatrix}$$

$$\begin{vmatrix} -62 & -95 \\ 87 & 52 \end{vmatrix}$$
  $\begin{vmatrix} -1 & -4 \\ 5 & 7 \end{vmatrix}$ 

$$\begin{pmatrix}
-72 & -56 & 19 \\
31 & -79 & 31 \\
-56 & -15 & 44 \\
-94 & -60 & 15
\end{pmatrix}$$

$$\begin{vmatrix}
-9 & 7 \\
1 & -5
\end{vmatrix}$$

$$\begin{pmatrix}
-9 & 0 \\
-6 & 5 \\
-1 & -4
\end{pmatrix}$$

$$\begin{vmatrix}
-2 & 4 & -4 \\
-1 & 4 & 5 \\
8 & -1 & 2
\end{vmatrix}$$

$$\begin{pmatrix}
7 & 9 & 6 & 4 \\
-5 & -5 & -9 & -8 \\
6 & -8 & -4 & -7 \\
7 & 1 & 7 & 0
\end{pmatrix}
\begin{pmatrix}
-64 & 5 & -65 & 45 & | & -57 \\
-43 & 94 & -78 & 7 & | & 5
\end{pmatrix}$$

$$\begin{vmatrix}
-93 & 41 & 14 \\
-2 & -22 & -78 \\
68 & -5 & 68
\end{vmatrix}$$

$$\begin{vmatrix}
-61 & 57 \\
-93 & -62
\end{vmatrix}$$

$$\begin{pmatrix}
-9 & 0 & 3 & -6 \\
-4 & 7 & 6 & -2 \\
-2 & 3 & 4 & -4 \\
-2 & 7 & -6 & 4 \\
2 & 3 & 1 & 4
\end{pmatrix}$$

$$\begin{pmatrix}
66 & 66 & 24 & 95 \\
-70 & 30 & 35 & -97
\end{pmatrix}$$

$$\begin{pmatrix}
8 & -3 & 6 & 1 & -3 & 7 \\
7 & 3 & -7 & -2 & 6 & 8 \\
-8 & 9 & 8 & -1 & -1 & 3 \\
1 & -4 & -3 & -7 & 8 & -5 \\
-1 & -1 & 3 & 6 & 4 & 5
\end{pmatrix}
\begin{pmatrix}
-8 & -9 & 6 \\
-4 & 7 & -1
\end{pmatrix}$$

$$\begin{pmatrix} -22 & 96 & 22 & -46 & -37 & | & -45 \\ -69 & 89 & 74 & -50 & -52 & | & -80 \\ -54 & 55 & -22 & 60 & -9 & | & -61 \\ -47 & 47 & 43 & 98 & -34 & | & -3 \end{pmatrix} \qquad \begin{vmatrix} -6 & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8 & | & -8$$

$$\begin{pmatrix}
-3 & -1 & -8 & | & 5 \\
-8 & -7 & -9 & | & 5 \\
-6 & 8 & -5 & | & -8
\end{pmatrix}$$

$$\begin{vmatrix}
-8 & 5 & -8 \\
3 & 4 & 8 \\
-3 & -3 & -7
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
7 & -3 & 7 & 7 \\
6 & -8 & -5 & -3
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
7 & -1 & 5 \\
-7 & -6 & 0 \\
3 & -1 & -9
\end{array}\right|$$

$$\begin{vmatrix}
16 & -465 & -212 \\
-146 & 477 & 196 \\
-729 & 479 & -302
\end{vmatrix} \qquad \begin{pmatrix}
4 & -9 & 3 & | & -8 \\
8 & -3 & 4 & | & 8
\end{pmatrix}$$

$$\begin{pmatrix}
26 & 76 \\
97 & 82 \\
31 & 46
\end{pmatrix} \qquad \begin{pmatrix}
-1 & -9 & -7 & 0 & 9 & -2 \\
2 & 2 & 4 & 7 & -2 & -9
\end{pmatrix}$$

$$\begin{vmatrix}
 52 & 3 \\
 -87 & 67
 \end{vmatrix}
 \qquad \begin{pmatrix}
 7 & 9 & 1 & | & -4 \\
 -2 & 3 & 4 & | & 0
 \end{pmatrix}$$

$$\begin{pmatrix}
-1 & -73 & 57 \\
87 & -98 & -46
\end{pmatrix} \qquad \begin{pmatrix}
8 & 9 & -6 \\
8 & -6 & 3
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
57 & 581 & 455 & 307 \\
-287 & -952 & -505 & -321
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
9 & -7 \\
1 & 9 \\
9 & 3
\end{array}\right)$$

$$\left(\begin{array}{cccccc} 2 & 9 & 3 & -6 & 5 \\ -5 & -3 & -7 & 6 & -8 \end{array}\right) \left(\begin{array}{ccccccc} -80 & -50 & 41 & 94 & 13 \\ 66 & 65 & 88 & -50 & -52 \end{array}\right)$$

$$\begin{pmatrix}
-4 & -74 & -7 & | & -60 \\
-48 & 14 & -43 & | & -7 \\
-76 & -22 & -86 & | & -38
\end{pmatrix}$$

$$\begin{pmatrix}
3 & -1 & | & -7 \\
0 & -8 & | & -1
\end{pmatrix}$$

$$\begin{vmatrix}
 8 & -4 \\
 2 & -8
 \end{vmatrix}
 \begin{vmatrix}
 857 & -294 \\
 -538 & -129
 \end{vmatrix}$$

$$\left(\begin{array}{ccc}
3 & 8 \\
0 & 5
\end{array}\right) \qquad \left|\begin{array}{cccc}
29 & 65 & 94 \\
82 & 80 & 27 \\
32 & 41 & -71
\end{array}\right|$$

$$\begin{vmatrix}
-17 & 34 & 8 \\
90 & 9 & -85 \\
-76 & -87 & -36
\end{vmatrix}$$

$$\begin{pmatrix}
0 & 9 & -7 & -1 & | & -4 \\
-7 & 4 & -1 & 5 & | & 2 \\
-4 & -7 & 4 & 5 & | & -8
\end{pmatrix}$$

$$\begin{pmatrix}
6 & -1 & -2 \\
-7 & 2 & -4 \\
5 & -3 & -9 \\
8 & -5 & 5
\end{pmatrix}
\begin{pmatrix}
6 & 9 & -4 & 6 & -4 & 6 \\
0 & 2 & 8 & -1 & -4 & -5 \\
4 & -3 & -2 & -7 & 7 & -9 \\
-9 & -4 & -3 & -8 & -2 & -4
\end{pmatrix}$$

$$\begin{vmatrix}
-18 & 23 \\
38 & 57
\end{vmatrix}
\qquad \qquad \begin{pmatrix}
572 & -319 & | -569 \\
878 & -254 & | 203
\end{pmatrix}$$

$$\begin{pmatrix} 1 & -2 \\ 9 & -5 \end{pmatrix} \qquad \begin{pmatrix} 85 & 41 & 46 \\ 37 & 38 & -39 \\ -40 & -31 & -37 \\ -13 & 29 & 38 \end{pmatrix}$$

$$\left(\begin{array}{cc|c}
51 & -52 & 96 \\
-92 & 22 & 6
\end{array}\right) \qquad \left|\begin{array}{cc|c}
24 & 81 \\
97 & -70
\end{array}\right|$$

$$\left(\begin{array}{cc} 5 & -1 \\ -5 & 8 \end{array}\right) \qquad \left|\begin{array}{cc} 8 & 59 \\ 19 & 85 \end{array}\right|$$

$$\begin{pmatrix}
-8 & -9 & 9 \\
-3 & 1 & 0 \\
-4 & -5 & 4 \\
4 & 4 & -4 \\
7 & 2 & 5
\end{pmatrix}$$

$$\begin{vmatrix}
4 & -4 & 4 \\
9 & 6 & -7 \\
2 & 8 & -5
\end{vmatrix}$$

$$\begin{pmatrix} -9 & 8 \\ 0 & -7 \\ -9 & 0 \\ 7 & -7 \\ 3 & -1 \end{pmatrix} \qquad \begin{pmatrix} 771 & 494 \\ -338 & -736 \\ -356 & 983 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-50 & -66 & -64 \\
90 & -71 & 52
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
7 & 4 & 0 & -6 \\
-2 & -6 & -6 & 6
\end{array}\right)$$

$$\begin{pmatrix}
-34 & -9 & | & 42 \\
85 & -62 & | & -8
\end{pmatrix}$$

$$\begin{vmatrix}
-5 & 3 & 7 & -6 \\
4 & 3 & 8 & -6 \\
7 & 1 & 0 & -4 \\
-6 & -4 & -3 & 1
\end{vmatrix}$$

$$\left( \begin{array}{ccc|c} -256 & 437 & 497 & -656 & 549 \\ 416 & -300 & 135 & -37 & 284 \end{array} \right) \left( \begin{array}{ccc|c} 55 & 91 \\ -98 & -69 \\ 12 & -84 \end{array} \right)$$

$$\begin{vmatrix}
15 & 69 & -76 & 47 \\
-97 & 80 & -35 & -15 \\
-42 & -33 & 66 & -63 \\
-44 & 47 & 3 & -51
\end{vmatrix}
\qquad
\begin{pmatrix}
6 & -3 & -5 \\
8 & -4 & 9 \\
-2 & 5 & 8 \\
9 & -8 & -4
\end{pmatrix}$$

$$\begin{pmatrix} -274 & 575 \\ -394 & -744 \\ -415 & -816 \end{pmatrix} \qquad \begin{pmatrix} -7 & 9 & -2 \\ -6 & 0 & -4 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-99 & 78 & -6 & 85 & 77 \\
-62 & -86 & -6 & 24 & -2
\end{array}\right) \left(\begin{array}{ccc|c}
-52 & -10 & 0 & -97 \\
-72 & -31 & -22 & 49
\end{array}\right)$$

$$\begin{pmatrix}
7 & 7 \\
-5 & -2 \\
-4 & 1
\end{pmatrix}
\qquad
\begin{pmatrix}
-9 & -6 & 3 & -1 & -8 & | & -3 \\
9 & 6 & -7 & -3 & 6 & | & -2 \\
0 & 0 & 4 & 5 & -1 & | & -5 \\
9 & -7 & 6 & -6 & -3 & | & -2
\end{pmatrix}$$

$$\begin{pmatrix}
19 & 39 & -23 \\
27 & -9 & -63 \\
-70 & 5 & 91 \\
36 & 50 & -2
\end{pmatrix}$$

$$\begin{vmatrix}
-21 & 64 & -82 \\
-95 & 34 & 54 \\
8 & 34 & 53
\end{vmatrix}$$

$$\begin{vmatrix}
50 & -35 & -57 & -92 \\
29 & 60 & 29 & 53 \\
-99 & 75 & -4 & -74 \\
-90 & 32 & -32 & -28
\end{vmatrix}$$

$$\begin{vmatrix}
-25 & -14 \\
16 & -42
\end{vmatrix}$$

$$\begin{vmatrix}
6 & 4 & 4 & -9 \\
5 & 6 & -9 & -5 \\
-2 & 3 & -3 & -5 \\
-7 & -6 & -9 & -7
\end{vmatrix}$$

$$\begin{pmatrix}
-5 & 5 & -2 & 5 \\
-8 & -2 & 6 & 5 \\
-5 & 2 & 3 & 6
\end{pmatrix}$$

$$\begin{vmatrix}
20 & 86 & 3 & -39 \\
-3 & 93 & 93 & 46 \\
91 & 97 & -77 & -95 \\
-51 & -90 & -97 & 48
\end{vmatrix}$$

$$\begin{vmatrix}
49 & 20 & -7 \\
22 & 37 & -72 \\
-43 & 22 & -87
\end{vmatrix}$$

$$\begin{vmatrix}
-6 & 22 \\
27 & 13
\end{vmatrix}$$

$$\begin{vmatrix}
-9 & 6 & -8 & 7 \\
2 & -8 & -4 & -6 \\
6 & -5 & -3 & -3 \\
2 & -3 & -6 & 3
\end{vmatrix}$$

$$\left(\begin{array}{cc|c}
3 & -4 & 1 \\
-8 & 5 & -7
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-4 & 5 & -3 & -8 \\
8 & -3 & 4 & -8 \\
9 & -7 & -3 & 8
\end{array}\right)$$

$$\left(\begin{array}{ccc|c} -6 & -18 & 25 & -86 & 23 \\ 25 & -43 & 97 & 38 & 36 \end{array}\right) \left(\begin{array}{ccc|c} 31 & -13 & -50 & 75 & 61 & -54 \\ 62 & -46 & 4 & 59 & 60 & 48 \end{array}\right)$$

$$\begin{pmatrix} 15 & -99 \\ 57 & 3 \\ -74 & 66 \end{pmatrix} \qquad \begin{vmatrix} 46 & 79 & 19 & 97 \\ -68 & -77 & -61 & -10 \\ -74 & -65 & 41 & -85 \\ -89 & 30 & -2 & -49 \end{vmatrix}$$

$$\begin{pmatrix}
78 & -95 & -50 & -27 & | & 47 \\
-41 & -47 & 3 & 3 & | & 60 \\
25 & -35 & -25 & | & 47 & | & -3 \\
91 & -66 & 72 & 78 & | & 40
\end{pmatrix}$$

$$\begin{pmatrix}
-51 & 49 \\
-72 & -50 \\
-36 & -28 \\
-27 & -68
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
67 & -18 & -29 & -63 \\
-55 & -1 & -97 & -91
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
9 & -2 & \\
-2 & 0 & \\
\end{array}\right|$$

$$\begin{pmatrix} -5 & -6 \\ 0 & -6 \\ -8 & 3 \\ 0 & -1 \end{pmatrix} \qquad \begin{pmatrix} 42 & 55 & | & -68 \\ -24 & -98 & | & 14 \end{pmatrix}$$

$$\begin{vmatrix}
6 & 7 & -5 \\
-2 & -9 & 2 \\
3 & 2 & 1
\end{vmatrix}$$

$$\begin{vmatrix}
-13 & 82 & 93 & 8 \\
-99 & 97 & 51 & 60 \\
-21 & 13 & -57 & 4 \\
-15 & -79 & 99 & -3
\end{vmatrix}$$

$$\begin{vmatrix} -18 & 23 & -34 & 47 \\ -25 & -45 & -55 & -46 \\ -52 & -26 & -18 & -84 \\ 41 & -52 & 47 & -47 \end{vmatrix} \begin{pmatrix} 5 & 2 & -9 & 6 & -4 & -3 \\ 0 & -8 & -7 & 2 & 0 & 8 \\ 6 & -1 & -7 & -4 & 9 & 0 \end{pmatrix}$$

$$\begin{vmatrix}
95 & -95 \\
4 & 46
\end{vmatrix}$$

$$\begin{vmatrix}
0 & 2 & 0 \\
9 & 2 & -3 \\
0 & 9 & -7
\end{vmatrix}$$

$$\begin{vmatrix}
-34 & -13 & -89 & 34 \\
37 & 62 & 55 & -12 \\
-43 & 86 & 33 & -4 \\
46 & 35 & 93 & -71
\end{vmatrix} \begin{pmatrix}
217 & -621 & -823 & | & -168 \\
321 & -230 & 852 & | & 354
\end{pmatrix}$$

$$\begin{vmatrix} 7 & -4 & 6 & -7 \\ -5 & -3 & -1 & -8 \\ 0 & -6 & 2 & -8 \\ -6 & 7 & -8 & 8 \end{vmatrix} \begin{pmatrix} -821 & 282 & -806 & -108 & 763 \\ 35 & 612 & -38 & 95 & 445 \\ 7 & -461 & -356 & -484 & -379 \end{pmatrix}$$

$$\left(\begin{array}{cc|c}
8 & -4 & -4 \\
-8 & 1 & 7
\end{array}\right) \qquad \left|\begin{array}{cc|c}
76 & -83 \\
75 & 72
\end{array}\right|$$

$$\begin{pmatrix}
-2 & 6 & -1 & -7 & 9 \\
4 & 5 & -1 & -5 & -7 \\
5 & -5 & 0 & 2 & 7 \\
8 & 7 & -7 & 3 & 7
\end{pmatrix}
\begin{vmatrix}
4 & -6 & 3 & -8 \\
5 & -2 & -6 & 9 \\
-1 & -8 & 9 & -9 \\
-2 & -8 & 7 & 5
\end{vmatrix}$$

$$\begin{vmatrix} 65 & -59 & 99 \\ -4 & 17 & -95 \\ 98 & -88 & -78 \end{vmatrix} \qquad \begin{pmatrix} 72 & -34 & 40 \\ 30 & 9 & -2 \\ 35 & 89 & -43 \end{pmatrix}$$

$$\begin{pmatrix}
90 & -85 & | & 40 \\
89 & 40 & | & -15
\end{pmatrix}$$

$$\begin{pmatrix}
-72 & -4 \\
-14 & 2
\end{pmatrix}$$

$$\begin{vmatrix}
85 & -5 & -19 \\
-92 & 48 & 91 \\
28 & -8 & -57
\end{vmatrix}$$

$$\begin{pmatrix}
53 & -28 \\
-72 & 8 \\
-34 & -22 \\
55 & 29
\end{pmatrix}$$

$$\begin{pmatrix} 334 & 509 & 123 & 238 \\ 74 & -912 & 259 & 549 \\ 977 & 545 & -445 & -853 \\ 8 & 198 & 760 & 786 \end{pmatrix} \begin{pmatrix} 80 & -46 & -87 & 72 & | & 17 \\ 76 & 51 & 26 & 19 & | & 36 \end{pmatrix}$$

$$\begin{pmatrix} -4 & 4 & 4 & -3 \\ 9 & -9 & -3 & -3 \\ 8 & 1 & 9 & -6 \\ 4 & -8 & -6 & 1 \\ 7 & -2 & 3 & 0 \end{pmatrix} \qquad \begin{pmatrix} -5 & -4 & -9 & 2 & 0 \\ 7 & -6 & 0 & 6 & 3 \end{pmatrix}$$

$$\left(\begin{array}{cccc}
6 & -56 & -34 \\
83 & 90 & 46
\end{array}\right) \qquad \left(\begin{array}{ccccc}
6 & 7 & -5 & -6 \\
-2 & 6 & 6 & -9 \\
-6 & -8 & -6 & 0
\end{array}\right)$$

$$\begin{pmatrix}
9 & 1 & -2 & 8 & 0 \\
6 & -6 & -6 & 5 & 4 \\
8 & 6 & 0 & -6 & -3
\end{pmatrix}
\begin{vmatrix}
700 & 883 & -779 & -639 \\
-362 & 123 & 749 & -646 \\
-700 & 184 & 910 & 77 \\
938 & -762 & 340 & -540
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
2 & 5 & 0 & 1 \\
-9 & 0 & -9 & -9 \\
-3 & -8 & 2 & -5
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
4 & -2 & 1 & -7 \\
-7 & 4 & 2 & 6 \\
-2 & -2 & 1 & 7
\end{array}\right)$$

$$\begin{pmatrix} -618 & 801 & 438 \\ -816 & -624 & -257 \\ 55 & 880 & -845 \end{pmatrix} \begin{pmatrix} 342 & 782 & 683 & | & -939 \\ 746 & -474 & 451 & | & 461 \end{pmatrix}$$

$$\begin{vmatrix}
-92 & -66 & 14 \\
92 & -33 & 17 \\
-8 & 82 & 98
\end{vmatrix}$$

$$\begin{vmatrix}
-2 & 9 & 4 & -4 & -1 & 5 \\
-3 & -5 & 2 & 5 & 3 & 0 \\
7 & -7 & -5 & 2 & 5 & 3 \\
7 & 8 & 3 & -9 & -3 & -2
\end{vmatrix}$$

$$\begin{pmatrix}
22 & 61 & 84 \\
94 & -53 & -66
\end{pmatrix}$$

$$\begin{pmatrix}
-4 & -7 \\
8 & -6
\end{pmatrix}$$

$$\begin{vmatrix}
 9 & -3 & 6 \\
 2 & -1 & -7 \\
 -4 & -2 & -4
 \end{vmatrix}
 \begin{vmatrix}
 52 & 26 & 12 \\
 -6 & 6 & -54 \\
 21 & -1 & -17
 \end{vmatrix}$$

$$\begin{pmatrix} -66 & -62 & -13 & -33 & 64 & 21 \\ -93 & -33 & 9 & -51 & -79 & -13 \\ -23 & -98 & -50 & 55 & 12 & 62 \end{pmatrix} \begin{pmatrix} -4 & -4 \\ -1 & -4 \end{pmatrix}$$

$$\begin{pmatrix}
60 & -25 & -80 & 56 & -20 \\
-28 & -69 & -99 & 28 & -77 \\
36 & 28 & -77 & 21 & -19
\end{pmatrix}$$

$$\begin{vmatrix}
-88 & 77 \\
-71 & 5
\end{vmatrix}$$

$$\begin{pmatrix}
6 & -5 & | & 5 \\
-2 & 6 & | & 1
\end{pmatrix}$$

$$\begin{vmatrix}
71 & -48 & -75 & 37 \\
18 & 13 & -22 & -80 \\
-30 & 3 & 43 & 15 \\
-40 & -26 & -77 & -22
\end{vmatrix}$$

$$\left(\begin{array}{cc|c}
75 & -19 & 38 \\
75 & -33 & -11
\end{array}\right) \qquad \left(\begin{array}{cc|c}
84 & -67 & 71 \\
97 & 81 & -23
\end{array}\right)$$

$$\left(\begin{array}{cc|c}
59 & 91 & 21 \\
-34 & -30 & 68
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-5 & 6 & -5 \\
-4 & 0 & -4
\end{array}\right)$$

$$\begin{pmatrix} -18 & 99 & -53 & 84 & 75 & 79 \\ -42 & -93 & -10 & -87 & -62 & 67 \\ -17 & 8 & -5 & -31 & 22 & -1 \\ 5 & 56 & 75 & 99 & 57 & 47 \end{pmatrix} \begin{vmatrix} 7 & -8 & -2 \\ 5 & 1 & 6 \\ 7 & -8 & 1 \end{vmatrix}$$

$$\begin{pmatrix} -10 & -15 & -14 & 11 \\ 87 & -86 & -74 & 33 \\ 45 & 17 & -77 & 84 \end{pmatrix} \qquad \begin{pmatrix} -70 & 18 \\ 56 & -67 \\ -34 & -32 \end{pmatrix}$$

$$\left(\begin{array}{ccccc}
45 & -41 & -12 & -51 & -35 \\
71 & 98 & -75 & 74 & 78
\end{array}\right) \quad \left|\begin{array}{ccccccc}
-9 & 3 & -7 \\
5 & 2 & 9 \\
8 & -6 & -8
\end{array}\right|$$

$$\begin{vmatrix} 7 & 5 & 1 & 8 \\ -2 & -7 & 0 & 3 \\ -8 & -6 & -4 & -4 \\ 9 & 2 & -2 & 7 \end{vmatrix} \begin{vmatrix} 77 & 60 & -31 \\ -13 & 90 & 36 \\ -24 & 69 & -4 \end{vmatrix}$$

$$\begin{vmatrix}
-89 & 52 & 45 \\
-33 & 5 & -9 \\
22 & 81 & 79
\end{vmatrix}$$

$$\begin{vmatrix}
72 & 66 \\
-71 & -34
\end{vmatrix}$$

$$\begin{vmatrix}
-3 & -8 & -7 \\
-7 & -1 & -4 \\
5 & 0 & -8
\end{vmatrix}$$

$$\begin{pmatrix}
-5 & -8 & 9 \\
9 & -9 & 4
\end{pmatrix}$$

$$\left(\begin{array}{cc}
841 & 615 \\
-60 & 246
\end{array}\right) \qquad \left|\begin{array}{cc}
7 & 21 \\
5 & 9
\end{array}\right|$$

$$\left(\begin{array}{ccc|c}
3 & -5 & 4 & -1 & 8 \\
-8 & -3 & -3 & -5 & -6
\end{array}\right)
\left(\begin{array}{ccc|c}
1 & -5 & 4 & 7 & -9 \\
1 & 2 & -9 & -7 & 6 \\
-8 & -7 & -9 & 0 & 0 \\
-1 & 5 & 8 & -9 & -3
\end{array}\right)$$

$$\begin{pmatrix}
-7 & -3 & 9 \\
-4 & -8 & 6 \\
-5 & -3 & 5 \\
9 & 6 & 3
\end{pmatrix}$$

$$\begin{vmatrix}
60 & -56 & 46 \\
66 & -82 & 71 \\
73 & 79 & 60
\end{vmatrix}$$

$$\begin{vmatrix}
74 & 61 & 95 & 93 \\
-15 & -54 & 93 & -40 \\
-79 & 12 & 52 & -98 \\
-58 & 20 & -90 & -38
\end{vmatrix}$$

$$\begin{pmatrix}
41 & 47 & 74 \\
-53 & 39 & -5
\end{pmatrix}$$

$$\begin{pmatrix} 87 & -36 \\ -4 & -95 \\ 1 & -95 \\ 50 & 72 \end{pmatrix} \qquad \begin{pmatrix} -988 & 384 & -833 & -963 \\ 474 & -943 & 920 & -10 \\ 342 & -573 & 282 & -735 \\ -294 & 297 & -780 & 405 \end{pmatrix}$$

$$\begin{pmatrix} -56 & 95 \\ -6 & 22 \\ 75 & -49 \\ -14 & 67 \end{pmatrix} \qquad \begin{pmatrix} 4 & -1 & -3 & -9 \\ -3 & -3 & 9 & -8 \\ -3 & 8 & -8 & -1 \end{pmatrix}$$

$$\begin{pmatrix} -40 & -46 & -50 & 91 & -5 & 91 \\ -33 & 92 & 96 & 54 & 9 & -93 \\ 42 & 92 & 80 & 84 & 68 & 56 \\ 50 & -89 & -28 & 28 & 93 & 48 \\ 52 & -82 & 36 & -76 & 22 & -51 \end{pmatrix} \begin{vmatrix} 3 & -6 & -4 \\ -3 & 7 & -6 \\ 6 & -7 & 4 \end{vmatrix}$$

$$\begin{pmatrix} -79 & 41 & -67 \\ 95 & 52 & -54 \\ 88 & -76 & 84 \end{pmatrix} \qquad \begin{pmatrix} 45 & 99 & -61 \\ 93 & 47 & 28 \end{pmatrix}$$

$$\begin{pmatrix}
-1 & -7 & 2 & -3 & -2 \\
2 & -8 & -5 & 8 & -7 \\
9 & -2 & -8 & -9 & 0
\end{pmatrix}
\begin{pmatrix}
1 & -7 & 4 & 8 \\
-4 & -3 & -8 & -8 \\
8 & 7 & 5 & -7 \\
3 & 5 & 4 & 4
\end{pmatrix}$$

$$\begin{pmatrix}
58 & -76 & -13 \\
-47 & -55 & -14 \\
32 & 75 & 78
\end{pmatrix}$$

$$\begin{vmatrix}
-5 & 6 \\
-1 & -1
\end{vmatrix}$$

$$\begin{pmatrix} -8 & 4 \\ 6 & 3 \\ -6 & 6 \end{pmatrix} \qquad \begin{pmatrix} -9 & 1 & 0 \\ 5 & -4 & -1 \end{pmatrix}$$

$$\begin{pmatrix}
66 & 35 & -25 & | & -66 \\
29 & 2 & -40 & | & 64 \\
63 & 2 & 7 & | & 45
\end{pmatrix}
\qquad
\begin{pmatrix}
75 & -6 & -18 \\
9 & 26 & 52 \\
2 & 59 & 57 \\
-54 & 22 & -73
\end{pmatrix}$$

$$\begin{vmatrix}
 -8 & 4 \\
 0 & -4
 \end{vmatrix}
 \begin{vmatrix}
 -45 & -70 \\
 -57 & -84
 \end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
1 & -7 & 7 \\
-8 & -9 & 4
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
57 & 78 & 78 \\
5 & 93 & 11
\end{array}\right)$$

$$\begin{pmatrix}
3 & 2 \\
3 & 0 \\
9 & 7
\end{pmatrix} \qquad \qquad \begin{vmatrix}
36 & 97 \\
91 & 45
\end{vmatrix}$$

$$\begin{pmatrix} -52 & 49 \\ 34 & -7 \\ -51 & -65 \\ 59 & 34 \\ 67 & 20 \end{pmatrix} \qquad \begin{pmatrix} 96 & -62 & 4 & 31 & 36 \\ -47 & -60 & -3 & -17 & -48 \end{pmatrix}$$

$$\begin{vmatrix}
3 & -8 \\
5 & -1
\end{vmatrix}
\begin{vmatrix}
-92 & -35 & 98 \\
73 & 38 & -41 \\
91 & 68 & -65
\end{vmatrix}$$

$$\begin{pmatrix} -116 & -589 & -888 & 765 & | & -336 \\ 886 & -95 & 211 & -369 & | & 773 \\ 331 & -718 & 291 & -965 & | & 224 \end{pmatrix} \begin{pmatrix} 38 & -49 \\ -86 & -9 \end{pmatrix}$$

$$\begin{pmatrix}
1 & 8 & 3 \\
9 & -5 & 8 \\
-5 & 9 & 5 \\
-8 & 9 & -6
\end{pmatrix}$$

$$\begin{vmatrix}
-5 & -3 \\
-3 & -2
\end{vmatrix}$$

$$\left(\begin{array}{cc}
-9 & 9 \\
19 & -82
\end{array}\right) \qquad \left|\begin{array}{cc}
-6 & -5 \\
-1 & -8
\end{array}\right|$$

$$\begin{pmatrix}
-2 & -4 & -8 \\
-5 & 7 & 0 \\
-1 & 9 & 5
\end{pmatrix}
\begin{vmatrix}
30 & -98 & 23 \\
87 & -63 & -8 \\
34 & -24 & -40
\end{vmatrix}$$

$$\begin{pmatrix}
-1 & -8 & 3 & 0 \\
9 & 8 & -6 & 7 \\
8 & -7 & -8 & -2
\end{pmatrix}$$

$$\begin{pmatrix}
-84 & -98 & -39 \\
20 & 75 & -61
\end{pmatrix}$$

$$\left(\begin{array}{ccc}
4 & 3 & -9 \\
-5 & 7 & 9
\end{array}\right) \qquad \left|\begin{array}{ccc}
6 & -7 \\
3 & 9
\end{array}\right|$$

$$\begin{vmatrix} 585 & -398 & 835 \\ 424 & -705 & 44 \\ 918 & 461 & -213 \end{vmatrix} \qquad \left( \begin{array}{cccc} -78 & 49 & 6 \\ 94 & -8 & -13 \end{array} \right)$$

$$\begin{pmatrix}
81 & 18 \\
32 & -38 \\
-57 & -26 \\
20 & -52
\end{pmatrix}$$

$$\begin{vmatrix}
-4 & -4 & 1 \\
6 & -1 & 6 \\
-3 & 5 & 4
\end{vmatrix}$$

$$\begin{vmatrix}
-66 & 75 & 62 & 17 \\
-8 & 79 & -98 & 90 \\
0 & 20 & 15 & 22 \\
-23 & 69 & -12 & -28
\end{vmatrix}$$

$$\begin{pmatrix}
-3 & -2 & -6 \\
-3 & 6 & 3 \\
2 & -2 & -4
\end{pmatrix}$$

$$\begin{pmatrix}
8 & 3 & -3 \\
5 & -1 & -1 \\
3 & -7 & -6 \\
-4 & -6 & -3 \\
1 & 5 & 5
\end{pmatrix}$$

$$\begin{pmatrix}
-3 & -9 & 3 & 0 \\
-1 & -5 & 1 & 5
\end{pmatrix}$$

$$\begin{pmatrix}
36 & -68 & -86 \\
78 & -34 & -34
\end{pmatrix} \qquad \qquad \begin{pmatrix}
-5 & 6 & -1 \\
-2 & 6 & 5
\end{pmatrix}$$

$$\begin{pmatrix} 2 & 8 \\ 3 & 9 \\ 1 & -2 \end{pmatrix} \qquad \begin{pmatrix} 90 & 87 & -78 & 6 & 26 & | & -53 \\ -87 & 28 & 18 & -34 & -67 & | & -72 \\ -72 & 30 & 36 & -95 & 49 & | & 45 \\ -29 & 97 & -57 & -12 & -13 & | & -47 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c} 49 & 66 & -73 & 75 \\ 48 & 28 & 42 & -55 \end{array}\right) \left(\begin{array}{ccc|c} -5 & -1 & 0 & 5 & 1 & -4 \\ -5 & 9 & 6 & -9 & -8 & -9 \end{array}\right)$$

$$\begin{vmatrix}
-61 & -62 & 53 & 73 \\
-52 & -17 & 6 & 81 \\
40 & -72 & -78 & 82 \\
5 & -48 & -60 & 32
\end{vmatrix} \begin{pmatrix}
2 & -3 & -6 & 9 & -1 \\
8 & -2 & -1 & 6 & 1 \\
-6 & 0 & 9 & -2 & -9
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c} -63 & -78 & -39 & -66 \\ -23 & -89 & 97 & -38 \end{array}\right) \quad \left(\begin{array}{ccc|c} -6 & -6 & 3 & -6 \\ 4 & 4 & -9 & 9 \end{array}\right)$$

$$\begin{pmatrix}
60 & -81 & 63 & | & -85 \\
-29 & 1 & -42 & | & -50
\end{pmatrix}
\begin{pmatrix}
0 & 0 & 1 & 2 & | & 7 \\
4 & 5 & 2 & -7 & | & -1 \\
7 & 8 & -9 & 1 & | & 5 \\
8 & -3 & -6 & -9 & | & 3
\end{pmatrix}$$

$$\begin{pmatrix}
8 & 0 & -4 & 6 \\
1 & 6 & -9 & 3
\end{pmatrix}$$

$$\begin{vmatrix}
-61 & -80 & -38 & 84 \\
68 & 98 & 69 & -14 \\
-50 & 17 & 93 & 89 \\
-31 & -9 & 10 & 55
\end{vmatrix}$$

$$\begin{pmatrix}
20 & -42 & -58 & 76 \\
-40 & -33 & -94 & 34 \\
26 & 22 & 68 & -96
\end{pmatrix}
\begin{pmatrix}
96 & -45 & 78 & -13 \\
43 & 36 & 0 & -96
\end{pmatrix}$$

$$\left| \begin{array}{ccc}
79 & 50 \\
-64 & -56
\end{array} \right| \qquad \left| \begin{array}{cccc}
8 & 3 & 4 \\
8 & 2 & -8 \\
3 & 9 & -6
\end{array} \right|$$

$$\begin{pmatrix} -4 & 0 \\ -1 & 7 \\ 4 & 0 \\ -1 & -2 \end{pmatrix}$$

$$\begin{vmatrix} 14 & 76 \\ -41 & -80 \end{vmatrix}$$

$$\begin{array}{c|ccccc}
-71 & 53 & 0 \\
38 & 34 & 30 \\
51 & 35 & 16
\end{array}$$

$$\begin{pmatrix}
-56 & -32 \\
47 & 47 \\
34 & -40 \\
-34 & -17
\end{pmatrix}$$

$$\begin{pmatrix}
-94 & -46 & -61 & 0 \\
-10 & -53 & 81 & -28 \\
-21 & 93 & 33 & 70 \\
60 & -76 & -15 & 51 \\
-16 & 58 & 33 & 5
\end{pmatrix}$$

$$\left|\begin{array}{cc} 42 & -50 \\ 21 & 86 \end{array}\right|$$

$$\begin{bmatrix} -5 & -3 & 8 & 3 \\ -3 & 3 & -1 & 2 \\ -6 & 9 & -6 & -6 \\ 6 & 2 & 6 & 1 \end{bmatrix}$$

$$\begin{bmatrix} -5 & -3 & 8 & 3 \\ -3 & 3 & -1 & 2 \\ -6 & 9 & -6 & -6 \\ 6 & 2 & 6 & 1 \end{bmatrix} \qquad \begin{pmatrix} 603 & 970 & 191 \\ -605 & -392 & -312 \end{pmatrix}$$

$$\left(\begin{array}{cc|c}
-8 & -1 & 3 \\
0 & -2 & -2
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-38 & -92 & 84 \\
-44 & 71 & 13
\end{array}\right)$$

$$\begin{pmatrix}
-102 & -735 & -151 & 419 & 27 \\
604 & -507 & -918 & 312 & 999 \\
971 & -966 & 937 & -359 & -44 \\
250 & -935 & -991 & 281 & 239
\end{pmatrix} \begin{pmatrix}
-29 & 72 & -43 \\
-63 & 69 & -94
\end{pmatrix}$$

$$\begin{pmatrix} -1 & 2 & 1 & 2 & | & -2 \\ -5 & -8 & -9 & 4 & | & 0 \\ -9 & 9 & 9 & 8 & | & 1 \end{pmatrix} \begin{pmatrix} -23 & -70 & 60 & -96 & | & -69 \\ 70 & -55 & 16 & 91 & | & -91 \\ -42 & 62 & 7 & 15 & | & 55 \end{pmatrix}$$

$$\begin{pmatrix}
-5 & 0 & -6 & 5 & -5 & | & -2 \\
5 & -7 & 0 & 7 & -7 & | & -7 \\
-6 & 8 & -6 & -4 & -3 & | & -7 \\
-6 & 9 & -2 & 8 & 3 & | & 2
\end{pmatrix}$$

$$\begin{vmatrix}
-1 & 7 & 0 \\
2 & -6 & 2 \\
-7 & -9 & -4
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c} 5 & 5 & -8 \\ 3 & -8 & -5 \end{array}\right) \qquad \left(\begin{array}{ccc|c} 5 & -8 & 1 \\ -6 & -1 & 6 \end{array}\right)$$

$$\begin{pmatrix}
-3 & 6 & -2 \\
5 & 6 & -8 \\
2 & 5 & -9
\end{pmatrix}$$

$$\begin{vmatrix}
-7 & -3 & 7 & -6 \\
4 & 1 & 9 & 6 \\
1 & -6 & -5 & -5 \\
2 & -5 & -2 & -5
\end{vmatrix}$$

$$\begin{pmatrix}
-3 & 0 \\
2 & -9
\end{pmatrix}
\qquad
\begin{pmatrix}
9 & -6 & 0 & 4 & 1 \\
3 & -3 & -9 & 2 & -2 \\
-9 & 5 & -1 & 9 & 8 \\
9 & 2 & -4 & 1 & 2
\end{pmatrix}$$

$$\begin{pmatrix} -70 & -26 & 7 & | & -67 \\ -74 & 51 & 32 & | & 41 \\ 52 & 18 & -91 & | & -28 \end{pmatrix} \qquad \begin{pmatrix} -43 & 86 & | & -34 \\ 36 & -18 & | & -69 \end{pmatrix}$$

$$\begin{pmatrix} -8 & 5 & -8 \\ -4 & -3 & 8 \\ 8 & 7 & -4 \\ 8 & 1 & 2 \end{pmatrix} \qquad \begin{pmatrix} 8 & 1 & 2 & | & 6 \\ 4 & 4 & -2 & | & -4 \end{pmatrix}$$

$$\left(\begin{array}{cccc}
-7 & 0 & 8 & 7 \\
-2 & 7 & 0 & 8
\end{array}\right) \qquad \left|\begin{array}{ccccc}
-24 & -82 & 19 \\
96 & 63 & -23 \\
-94 & 26 & 62
\end{array}\right|$$

$$\left(\begin{array}{ccc|c}
-2 & -5 & 3 \\
9 & -3 & 1
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
2 & 7 & -7 & 2 & -3 \\
9 & -9 & -2 & 0 & -4 \\
-5 & -5 & 6 & -6 & -1
\end{array}\right)$$

$$\begin{vmatrix}
-59 & -28 \\
-31 & -98
\end{vmatrix} \qquad \begin{pmatrix}
850 & -853 & -519 & -692 \\
-705 & -54 & 767 & -231
\end{pmatrix}$$

$$\begin{pmatrix}
-936 & 97 \\
734 & -865 \\
132 & -937 \\
-476 & 857
\end{pmatrix}$$

$$\begin{vmatrix}
-2 & 8 \\
-9 & 7
\end{vmatrix}$$

$$\begin{vmatrix}
-4 & 0 & -9 \\
-6 & 4 & -4 \\
4 & 8 & -4
\end{vmatrix}$$

$$\begin{pmatrix}
-1 & -2 \\
-7 & 9
\end{pmatrix}$$

$$\begin{pmatrix} -2 & -2 & 1 & 1 & | & -1 \\ -4 & 7 & -2 & 4 & | & 8 \\ 8 & -1 & 1 & 3 & | & 0 \\ -6 & -8 & -4 & -5 & | & -4 \end{pmatrix} \begin{pmatrix} 87 & -14 & 8 & 94 & -8 & | & 86 \\ 51 & -75 & 27 & -19 & 34 & | & 3 \\ 64 & -36 & 73 & 77 & | & 49 & | & 62 \\ 88 & -46 & 14 & -14 & 73 & | & -28 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c} 7 & 6 & 9 & 6 & -3 \\ -7 & 4 & 1 & -8 & 4 \end{array}\right) \quad \left(\begin{array}{ccc|c} 0 & -4 & -6 & 8 & -8 \\ -8 & -3 & -8 & -5 & 1 \end{array}\right)$$

$$\left(\begin{array}{ccc|c}
-2 & -5 & 6 & -7 & 8 \\
6 & 2 & 6 & 0 & -4
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
-19 & 9 \\
-98 & -89
\end{array}\right|$$

$$\left(\begin{array}{ccc|c}
79 & 31 & -82 \\
63 & 60 & -95
\end{array}\right)$$

$$\left(\begin{array}{ccc|c}
2 & 5 & -8 & 0 \\
-4 & -2 & 3 & 9 \\
-2 & -5 & 9 & -1 \\
4 & 5 & 6 & 3
\end{array}\right)$$

$$\left( \begin{array}{ccc|ccc} -1 & -2 & -5 \\ 3 & 3 & 7 \end{array} \right) \left( \begin{array}{cccc|ccc} 916 & -577 & 568 & 640 & 206 & 822 \\ 534 & -226 & -275 & 579 & -755 & -447 \\ 140 & -184 & -738 & 816 & -636 & -688 \end{array} \right)$$

$$\begin{pmatrix} -700 & -689 & -859 & -555 & 111 \\ -390 & -21 & 294 & 278 & -761 \end{pmatrix} \begin{pmatrix} 2 & 2 & 6 & -2 & -9 \\ 3 & -9 & 6 & 9 & 2 \\ -6 & -2 & 3 & 3 & 1 \\ 9 & 8 & -4 & 4 & -1 \end{pmatrix}$$

$$\begin{vmatrix}
-8 & 1 & 0 \\
9 & 3 & 9 \\
8 & -1 & -8
\end{vmatrix}$$

$$\begin{pmatrix}
-66 & 40 & | -18 \\
11 & -95 & | -77
\end{pmatrix}$$

$$\begin{pmatrix} 7 & -9 \\ -9 & -5 \\ 4 & 3 \end{pmatrix} \begin{pmatrix} 49 & 34 & 50 & 35 & -42 \\ -91 & 64 & -84 & -12 & -62 \\ 69 & 99 & 21 & 40 & -92 \\ -38 & -84 & -68 & -61 & 71 & 78 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
7 & -1 & 4 & 9 \\
6 & -7 & 6 & -9 \\
-7 & 8 & 0 & 8
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
7 & 4 \\
-8 & -3 \\
5 & 8 \\
7 & 5
\end{array}\right)$$

$$\begin{vmatrix}
7 & -19 & 1 \\
-48 & -57 & -75 \\
-34 & 0 & 69
\end{vmatrix}$$

$$\begin{pmatrix}
2 & 1 & 7 & -2 \\
-1 & -8 & 4 & 6
\end{pmatrix}$$

$$\left|\begin{array}{cc} 8 & 4 \\ 6 & 2 \end{array}\right|$$

$$\left(\begin{array}{cc|c} -2 & -9 & -1 \\ 7 & 7 & 3 \end{array}\right)$$

$$\left(\begin{array}{cc} 8 & -6 \\ -3 & -4 \end{array}\right)$$

$$\begin{pmatrix}
-49 & 29 \\
-80 & 7 \\
3 & -6 \\
-43 & 45
\end{pmatrix}$$

$$\left(\begin{array}{ccc}
70 & -37 & 62 \\
-68 & -76 & 4 \\
-79 & -95 & -6
\end{array}\right)$$

$$\begin{pmatrix}
4 & 6 & -2 \\
-7 & 9 & 8 \\
9 & 1 & -6 \\
2 & 0 & -3 \\
3 & -2 & 1
\end{pmatrix}$$

$$\begin{vmatrix} 80 & -53 \\ 39 & -14 \end{vmatrix}$$

$$\begin{array}{c|c} 1 & -4 \\ -6 & -3 \end{array}$$

$$\left(\begin{array}{ccc|c}
7 & 4 & -7 & -9 \\
-9 & -4 & -9 & 5 \\
0 & -6 & 8 & 2
\end{array}\right)$$

$$\left|\begin{array}{cc} 1 & -7 \\ -6 & 5 \end{array}\right|$$

$$\begin{vmatrix}
-1 & -1 & 6 \\
-1 & -8 & 5 \\
4 & -7 & 9
\end{vmatrix}$$

$$\begin{vmatrix}
75 & 49 \\
96 & -80
\end{vmatrix}$$

$$\left| \begin{array}{ccc|c}
1 & -8 \\
2 & 7
\end{array} \right| 
\left( \begin{array}{ccc|c}
-4 & 5 & 9 & 8 & -3 & 5 \\
6 & 9 & 9 & -6 & -4 & 1
\end{array} \right)$$

$$\begin{pmatrix}
10 & 19 & -43 & 67 \\
-74 & 67 & 37 & 99
\end{pmatrix}
\begin{pmatrix}
62 & 54 & -96 & -40 \\
0 & -35 & 39 & -19 \\
88 & -60 & -56 & 50 \\
-99 & -27 & 54 & 98
\end{pmatrix}$$

$$\begin{pmatrix} -357 & -691 & 286 & -613 & 824 \\ -76 & -753 & -451 & 46 & 245 \\ 16 & 166 & -680 & -29 & -744 \\ -520 & 619 & 745 & 302 & -231 \end{pmatrix} \begin{pmatrix} -9 & 9 & -9 \\ -5 & 0 & -5 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
6 & -4 & -4 & -7 \\
7 & 8 & 9 & 2 \\
6 & -8 & 9 & 9
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
4 & -5 & -3 \\
1 & -4 & 8 \\
-2 & -7 & 5
\end{array}\right|$$

$$\begin{pmatrix} -81 & 58 & 52 & -30 \\ 48 & -88 & -63 & -33 \\ 15 & -1 & -40 & -11 \end{pmatrix} \begin{pmatrix} -9 & 3 & -1 & 5 & 1 \\ 6 & -6 & 3 & 5 & 0 \\ -4 & 2 & 7 & 7 & -3 \end{pmatrix}$$

$$\begin{pmatrix}
-33 & -81 & 40 & -39 \\
83 & -57 & -86 & 91 \\
48 & 31 & 26 & 35
\end{pmatrix}
\begin{vmatrix}
3 & -8 & -1 & -2 \\
2 & 9 & -3 & 6 \\
-1 & 1 & -1 & -4 \\
5 & -3 & -4 & -1
\end{vmatrix}$$

$$\begin{pmatrix}
-7 & -8 & -6 & -1 & -1 & | & 4 \\
1 & 3 & 3 & 6 & -4 & | & 6
\end{pmatrix} \qquad
\begin{pmatrix}
66 & 77 \\
-22 & -62 \\
34 & 56 \\
93 & -41 \\
-29 & -43
\end{pmatrix}$$

$$\begin{vmatrix}
37 & 90 & 63 & -9 \\
93 & -7 & 62 & 30 \\
-2 & 79 & 81 & -95 \\
75 & -37 & 54 & 81
\end{vmatrix}$$

$$\begin{pmatrix}
7 & 1 \\
-4 & -5
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-23 & 42 & 63 & -44 \\
96 & -74 & -39 & 90
\end{array}\right)
\left(\begin{array}{ccc|c}
7 & -3 & 8 & 4 \\
-7 & 8 & -5 & 3 \\
-2 & -1 & 0 & 3 \\
1 & 8 & -1 & -3
\end{array}\right)$$

$$\left(\begin{array}{ccc|c}
1 & 3 & -7 \\
-7 & -5 & -3
\end{array}\right) \left(\begin{array}{ccc|c}
30 & 51 & 52 & -64 & -30 \\
-37 & 15 & -92 & 63 & -50 \\
8 & -58 & 51 & 90 & -94 \\
71 & 57 & 88 & -51 & 68
\end{array}\right)$$

$$\begin{vmatrix} 92 & 73 \\ -56 & -48 \end{vmatrix} = \begin{pmatrix} 94 & 78 & -3 & -2 & -45 \\ 69 & -40 & -44 & 17 & 0 \\ -23 & -4 & 78 & 80 & 86 \\ -2 & -30 & 5 & 4 & 95 \\ -39 \end{vmatrix} = \begin{pmatrix} -88 \\ -96 \\ -43 \\ -39 \end{pmatrix}$$

$$\begin{pmatrix}
8 & 8 & -3 \\
-4 & 1 & -1 \\
-4 & -1 & 3 \\
-6 & -3 & -9
\end{pmatrix}$$

$$\begin{pmatrix}
99 & -2 & -17 & 35 \\
-98 & -89 & 25 & 99 \\
-34 & -64 & -38 & -41 \\
-81 & -37 & 21 & -11
\end{pmatrix}$$

$$\left( \begin{array}{ccc|c} -69 & 7 & 65 & -50 & -6 \\ -92 & 36 & 87 & 71 & -17 \end{array} \right) \left( \begin{array}{ccc|c} -2 & -9 & -2 & -8 \\ -8 & -3 & 0 & 8 \end{array} \right)$$

$$\begin{vmatrix}
-47 & 21 & 96 \\
-89 & 43 & 42 \\
-50 & 58 & 4
\end{vmatrix}$$

$$\begin{vmatrix}
4 & 4 \\
1 & 0
\end{vmatrix}$$

$$\begin{vmatrix} -4 & -1 \\ -8 & 3 \end{vmatrix}$$
  $\begin{vmatrix} -98 & -27 \\ 8 & -47 \end{vmatrix}$ 

$$\begin{pmatrix} -22 & 41 & 70 & -89 & 70 & | & -90 \\ 48 & 94 & -51 & 28 & 48 & | & 11 \\ -36 & -30 & 79 & -41 & -52 & | & -57 \\ -32 & -10 & 16 & 2 & -75 & | & -44 \\ -6 & 28 & 75 & -38 & 43 & | & -34 \end{pmatrix} \begin{vmatrix} -77 & 45 & 68 \\ -4 & -39 & 32 \\ -26 & -9 & 19 \end{vmatrix}$$

$$\left(\begin{array}{cccc}
3 & 5 & -4 & -6 \\
-5 & 4 & 9 & 4
\end{array}\right) \qquad \left(\begin{array}{cccc}
-5 & -3 \\
-56 & -84 \\
-45 & 63
\end{array}\right)$$

$$\begin{pmatrix} 73 & 43 & 94 \\ -75 & -32 & -49 \\ 75 & -93 & 8 \\ 30 & -24 & 93 \end{pmatrix} \begin{pmatrix} 42 & -25 & 26 & 13 & | & -39 \\ 86 & -2 & -70 & 62 & | & 1 \\ -47 & -63 & -97 & -34 & | & 86 \\ 66 & 41 & 66 & -13 & | & -35 \end{pmatrix}$$

$$\begin{pmatrix} 26 & 6 \\ -43 & 23 \end{pmatrix} \begin{pmatrix} -10 & 55 & 81 & 42 & -12 & -95 \\ -61 & -27 & -84 & 62 & 81 & -29 \\ -62 & 51 & -21 & -93 & -90 & 40 \\ 25 & 52 & -61 & 42 & -18 & -73 \\ -46 & -75 & 20 & -13 & 59 & 98 \end{pmatrix}$$

$$\begin{pmatrix}
91 & -73 & | & 82 \\
42 & 97 & | & 45
\end{pmatrix}$$

$$\begin{pmatrix}
9 & 5 \\
6 & -3 \\
0 & -6 \\
-3 & -9
\end{pmatrix}$$

$$\begin{pmatrix}
1 & 6 & -4 & -5 \\
7 & -6 & -4 & -9 \\
-4 & 2 & -8 & 3 \\
-5 & 6 & -1 & -3
\end{pmatrix}
\qquad
\begin{pmatrix}
-2 & 9 & -4 & 8 \\
-3 & 9 & 3 & -2 \\
-2 & 6 & -5 & 0
\end{pmatrix}$$

$$\begin{pmatrix} 7 & -5 & 1 & 4 & 2 \\ 8 & -6 & -5 & -8 & 6 \\ 7 & 3 & 6 & -6 & -1 \\ 0 & 0 & 7 & 7 & 3 \end{pmatrix} \quad \begin{pmatrix} 2 & -2 & -9 & -6 \\ -9 & 2 & 6 & 1 \end{pmatrix}$$

$$\begin{pmatrix}
-6 & 0 \\
-5 & 9 \\
1 & -9
\end{pmatrix}$$

$$\begin{pmatrix}
-8 & -8 & 8 \\
7 & 5 & -6
\end{pmatrix}$$

$$\begin{pmatrix}
3 & -7 & 8 & 0 & 8 \\
9 & -8 & 1 & 7 & -8
\end{pmatrix}
\begin{pmatrix}
-70 & 88 & 0 & 65 & -28 & 59 \\
29 & 47 & 76 & 59 & -10 & 30 \\
-32 & -39 & -57 & -42 & -27 & 21 \\
27 & -52 & -59 & -4 & -56 & -98
\end{pmatrix}$$

$$\begin{pmatrix} -3 & 33 & 80 \\ -94 & 0 & -46 \\ -34 & 78 & -65 \\ -68 & -80 & 83 \end{pmatrix} \begin{pmatrix} 53 & -66 & 67 & 94 & -2 \\ -69 & 47 & -70 & -75 & 14 \\ -62 & 96 & -42 & 70 & 16 \\ -64 & 11 & -22 & 69 & -87 \end{pmatrix}$$

$$\begin{pmatrix}
-6 & 5 & 3 \\
-8 & 5 & -7
\end{pmatrix}$$

$$\begin{pmatrix}
4 & 6 \\
-7 & 6
\end{pmatrix}$$

$$\begin{pmatrix}
-33 & -54 \\
-16 & 65
\end{pmatrix}
\qquad
\begin{pmatrix}
2 & 0 & 2 & -5 \\
-6 & 4 & -2 & -4
\end{pmatrix}$$

$$\begin{pmatrix} 0 & 4 & 5 & | & -2 \\ -6 & -9 & -2 & | & -5 \\ 7 & -2 & -3 & | & 4 \end{pmatrix} \begin{pmatrix} -645 & -909 & -581 & -888 & | & 967 \\ 636 & 124 & -890 & 280 & | & -951 \\ 121 & 676 & -615 & 957 & | & -681 \end{pmatrix}$$

$$\begin{pmatrix} 842 & 218 \\ 2 & 860 \\ -518 & -195 \\ -73 & -182 \end{pmatrix} \qquad \begin{pmatrix} 6 & -8 & 5 & 2 & 7 \\ 3 & -1 & 7 & -5 & 7 \\ -8 & -7 & -9 & -9 & -2 \end{pmatrix}$$

$$\begin{vmatrix}
-2 & 9 & 8 \\
-2 & -2 & 0 \\
1 & 1 & 7
\end{vmatrix}
\qquad
\begin{pmatrix}
4 & -7 & 7 & -7 & -3 & 0 \\
-7 & 0 & 8 & 4 & -7 & 2 \\
-9 & 0 & 9 & 3 & 9 & -1
\end{pmatrix}$$

$$\left(\begin{array}{cccc}
7 & 8 & -7 & 2 \\
-5 & -4 & 8 & -6
\end{array}\right) \qquad \left|\begin{array}{cccc}
1 & 5 \\
6 & -5
\end{array}\right|$$

$$\begin{vmatrix}
 7 & 2 & 7 & -2 \\
 7 & -7 & -1 & 7 \\
 -4 & -1 & 9 & -2 \\
 -9 & -3 & -2 & -1
 \end{vmatrix}
 \begin{vmatrix}
 475 & 445 \\
 -863 & 87
 \end{vmatrix}$$

$$\begin{pmatrix}
3 & -7 & -4 \\
-4 & 5 & -2 \\
-1 & 7 & 6
\end{pmatrix}
\qquad
\begin{pmatrix}
6 & -26 & -79 & 49 \\
14 & 64 & 8 & 85
\end{pmatrix}$$

$$\left(\begin{array}{cccc}
9 & 1 & -2 & 9 \\
2 & -4 & 6 & 5
\end{array}\right) \qquad \left(\begin{array}{cccc}
5 & -5 & 3 \\
-7 & 9 & -9
\end{array}\right)$$

$$\left(\begin{array}{ccc|c}
5 & 0 & -7 & 9 \\
-7 & 9 & -2 & -2 \\
7 & -7 & 5 & 3
\end{array}\right) \quad \left(\begin{array}{ccc|c}
9 & -1 & -5 & 4 & 2 \\
-8 & -1 & -1 & -3 & -6
\end{array}\right)$$

$$\left(\begin{array}{ccc|c} 4 & 8 & 0 & -7 \\ 6 & 9 & -7 & 6 \end{array}\right) \quad \left(\begin{array}{ccc|c} -7 & 7 & -6 & -5 & -4 \\ -3 & -1 & -6 & 9 & 9 \end{array}\right)$$

$$\begin{vmatrix} -94 & 24 & -99 \\ 70 & 8 & -41 \\ 80 & 46 & -62 \end{vmatrix} \begin{vmatrix} -829 & -246 & 627 & 86 & 571 & 572 \\ -70 & 883 & -669 & 770 & 282 & -849 \\ 953 & -821 & 372 & 96 & -292 & -282 \\ -799 & -763 & -339 & -1 & -286 & 645 \\ -240 & -884 & -371 & -939 & -668 & -455 \end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
99 & -52 \\
37 & -60
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-26 & -81 & -50 & -4 \\
-57 & 82 & -75 & -59 \\
20 & 9 & -25 & 10
\end{array}\right)$$

$$\begin{bmatrix} 22 & 93 & -9 & 43 \\ -57 & -24 & 27 & 37 \\ -6 & 65 & 51 & 31 \\ -43 & -83 & 6 & 85 \end{bmatrix} \qquad \begin{bmatrix} 3 & -3 & -3 \\ 3 & 1 & -2 \\ 4 & -7 & 6 \end{bmatrix}$$

$$\begin{pmatrix} 37 & -51 & -78 & 67 \\ 28 & 38 & -72 & -43 \\ 44 & -76 & -45 & 30 \end{pmatrix} \begin{pmatrix} -809 & 955 & -359 & 68 & -233 \\ -22 & -775 & 964 & -944 & -307 \end{pmatrix}$$

$$\begin{pmatrix}
1 & -3 & -7 \\
-9 & -7 & 3 \\
2 & -7 & 0 \\
-6 & -6 & -9
\end{pmatrix}$$

$$\begin{pmatrix}
2 & 7 & 7 & -8 & 0 \\
4 & 8 & -4 & 4 & -9
\end{pmatrix}$$

$$\left| \begin{array}{ccc}
-41 & 48 \\
84 & 46
\end{array} \right| 
\left| \begin{array}{cccc}
6 & 2 & 0 \\
-2 & 1 & -4 \\
9 & 8 & 5
\end{array} \right|$$

$$\begin{pmatrix}
-56 & 69 & -55 & -82 & 21 \\
-53 & 7 & -44 & -52 & -11 \\
19 & 46 & -33 & 12 & -29
\end{pmatrix}
\begin{vmatrix}
-34 & -87 & -33 & -26 \\
82 & -19 & -26 & 48 \\
8 & 85 & -4 & 11 \\
-72 & -19 & 85 & -30
\end{vmatrix}$$

$$\begin{vmatrix} -1 & -1 \\ 9 & 4 \end{vmatrix} = \begin{pmatrix} 85 & -33 & -41 & 54 & -98 & 74 \\ -89 & 35 & -71 & 23 & 18 & 80 \\ 29 & -8 & 82 & 44 & 40 & 74 \\ -50 & -74 & -45 & 16 & 71 & 41 \end{pmatrix}$$

$$\begin{pmatrix} -43 & 15 & 52 & 91 & -70 & -68 \\ 70 & -91 & -60 & -55 & 62 & 72 \\ 51 & 47 & -39 & -49 & -12 & -8 \\ -29 & -38 & -70 & 52 & 99 & -36 \\ -5 & 7 & -85 & 37 & -42 & 8 \end{pmatrix} \begin{pmatrix} -9 & 2 & 0 & -2 & 6 \\ 2 & 6 & -9 & 7 & -3 \\ -3 & 7 & -5 & 8 & -7 \end{pmatrix}$$

$$\begin{pmatrix}
20 & -18 & -28 \\
52 & 39 & 20 \\
23 & -44 & -66 \\
93 & 48 & -79 \\
77 & 39 & -39
\end{pmatrix}$$

$$\begin{vmatrix}
762 & -198 \\
-302 & 218
\end{vmatrix}$$

$$\begin{vmatrix}
928 & -807 \\
-654 & -685
\end{vmatrix}
\qquad \qquad \begin{pmatrix}
29 & -78 & | & -73 \\
3 & 28 & | & -42
\end{pmatrix}$$

$$\begin{pmatrix} -8 & -9 & 5 & -2 & 9 \\ 5 & -2 & -7 & 2 & 2 \\ -7 & 6 & -4 & 2 & 1 \\ -2 & -2 & -2 & 4 & 4 \end{pmatrix} \begin{pmatrix} -64 & 54 & 6 & -26 & -12 & -62 \\ 63 & 3 & 46 & 2 & 59 & -81 \\ -52 & 38 & -92 & 17 & 19 & 87 \\ -88 & 87 & 17 & -64 & 35 & -89 \\ 46 & 96 & -87 & -75 & -86 & 24 \end{pmatrix}$$

$$\begin{vmatrix}
-6 & 4 & -3 \\
-6 & -7 & 1 \\
7 & 3 & -2
\end{vmatrix}$$

$$\begin{pmatrix}
-859 & -521 & | 884 \\
-368 & -826 & | -345
\end{pmatrix}$$

$$\left( \begin{array}{ccc|c} 760 & 878 & -354 \\ -832 & 446 & -334 \end{array} \right) \left( \begin{array}{ccc|c} -84 & 57 & -77 & 71 & 73 & -4 \\ 14 & -65 & 82 & 36 & -55 & 81 \\ 51 & 12 & 5 & -88 & -57 & -61 \end{array} \right)$$

$$\begin{pmatrix} 93 & 3 & -84 & 6 \\ -85 & -71 & 77 & -29 \\ 35 & -69 & -68 & -30 \\ 33 & 41 & -68 & -56 \end{pmatrix} \begin{pmatrix} 422 & 970 & 127 & -60 & 435 \\ -55 & 599 & 172 & 810 & 286 \\ -421 & 948 & 118 & -436 & -703 \\ -663 & -600 & 663 & -556 & -351 \end{pmatrix}$$

$$\left(\begin{array}{cc|c}
15 & -25 & -13 \\
-40 & -60 & -98
\end{array}\right) \qquad \left(\begin{array}{cc|c}
667 & -227 & 729 \\
955 & -512 & -25 \\
-269 & 146 & 502
\end{array}\right)$$

$$\begin{vmatrix}
-8 & -4 & 3 \\
1 & -6 & 8 \\
4 & 1 & -7
\end{vmatrix}
\left(\begin{array}{ccc|ccc}
441 & -215 & -445 & 200 & 116 \\
-88 & -175 & 400 & 942 & -212
\end{array}\right)$$

$$\begin{pmatrix} -54 & 40 \\ -25 & -83 \\ 32 & -14 \\ -65 & -60 \\ -82 & -10 \end{pmatrix}$$

$$\begin{pmatrix} 5 & 0 \\ -9 & -5 \end{pmatrix}$$

$$\begin{pmatrix} -16 & 7 & 1 & -99 \\ 12 & -83 & 22 & 96 \\ -42 & -64 & 0 & 20 \end{pmatrix} \qquad \begin{pmatrix} -7 & -7 \\ 6 & -6 \\ 3 & 3 \\ 6 & 6 \\ -2 & 9 \end{pmatrix}$$

$$\left(\begin{array}{cc|c}
70 & -23 & -51 \\
32 & -89 & 78
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-8 & 74 & 25 & -8 \\
59 & -53 & 22 & -55 \\
9 & -73 & -2 & 79
\end{array}\right)$$

$$\begin{vmatrix}
-8 & -7 & 7 & 3 \\
-4 & -8 & 4 & -2 \\
-9 & 6 & 1 & 5 \\
7 & 2 & 5 & 1
\end{vmatrix}$$

$$\begin{vmatrix}
15 & 76 \\
-11 & 87
\end{vmatrix}$$

$$\begin{vmatrix} -1 & 83 \\ 25 & -47 \end{vmatrix} \begin{pmatrix} 3 & 45 & -48 & -39 & -75 & 35 \\ 48 & 43 & -74 & 55 & 74 & 83 \\ -44 & -72 & -31 & -94 & -20 & -15 \\ -80 & -82 & -91 & -55 & -29 & -56 \end{pmatrix}$$

$$\begin{pmatrix} -816 & -993 \\ 247 & 366 \end{pmatrix} \begin{pmatrix} -62 & 42 & 65 & -98 & -3 & | & -28 \\ 79 & 97 & 75 & -17 & -68 & | & -92 \\ -92 & 20 & -35 & -57 & 97 & | & 19 \\ 2 & -64 & 86 & 93 & -43 & | & 93 \\ 12 & -37 & -84 & -34 & -21 & | & -56 \end{pmatrix}$$

$$\begin{vmatrix} 61 & 87 & -6 & -8 \\ -73 & -4 & -97 & 21 \\ 32 & -48 & 44 & -36 \\ -31 & -1 & 96 & -7 \end{vmatrix} \qquad \begin{pmatrix} 79 & -69 & 15 \\ -19 & -44 & -44 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-3 & -5 & 7 & 8 \\
5 & -9 & 1 & 8
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
25 & 11 & -10 \\
43 & -41 & 46 \\
88 & -17 & 22
\end{array}\right|$$

$$\begin{pmatrix}
-5 & 8 & -9 & -5 & | & 4 \\
-2 & -8 & 2 & 2 & | & -2
\end{pmatrix}
\begin{vmatrix}
-22 & -34 & 29 & -54 \\
-89 & 74 & 48 & -65 \\
-93 & -20 & -79 & 74 \\
-53 & -34 & -48 & -88
\end{vmatrix}$$

$$\begin{pmatrix}
-40 & -55 & | & -23 \\
49 & 71 & | & 84
\end{pmatrix}$$

$$\begin{pmatrix}
94 & -65 & 58 \\
67 & 29 & -90 \\
-21 & 24 & -70 \\
-44 & 42 & -27 \\
3 & 74 & 73
\end{pmatrix}$$

$$\begin{pmatrix} 8 & -5 & 6 & 1 & -7 & 5 \\ -6 & 6 & -7 & 3 & 4 & -3 \\ -1 & 9 & -6 & 6 & 7 & 2 \\ 2 & -1 & 9 & 4 & 9 & 4 \\ 8 & 0 & 7 & 2 & 9 & -5 \end{pmatrix} \begin{pmatrix} 19 & 14 & 49 & 25 & 24 \\ -49 & -69 & 28 & -82 & 85 \\ -13 & 32 & -29 & -25 & 84 \\ -6 & -49 & 42 & -8 & -50 \end{pmatrix}$$

$$\begin{vmatrix}
 7 & 7 & 2 \\
 -9 & -4 & 0 \\
 9 & -9 & 5
 \end{vmatrix}$$

$$\begin{pmatrix}
 6 & 6 & 7 \\
 4 & -8 & -6
 \end{pmatrix}$$

$$\begin{pmatrix} 2 & 2 & 8 & | & -6 \\ 0 & 7 & 6 & | & 3 \\ 7 & -1 & 2 & | & -8 \end{pmatrix} \begin{pmatrix} -108 & 650 & -199 & 845 & | & -770 \\ -759 & 964 & -994 & -470 & | & -202 \end{pmatrix}$$

$$\begin{pmatrix} -862 & -507 & -114 & | & -618 \\ 122 & 555 & -599 & | & 365 \\ -577 & -365 & -269 & | & -431 \end{pmatrix} \begin{pmatrix} 2 & 4 & -3 & 1 \\ -6 & 8 & -8 & -1 \\ 7 & 2 & -9 & -8 \\ 6 & -4 & 9 & 3 \\ 3 & -3 & 7 & -2 \end{pmatrix}$$

$$\left| \begin{array}{cccc}
5 & -2 \\
8 & 6
\end{array} \right| \qquad \left( \begin{array}{cccc}
4 & -3 & 6 \\
2 & -7 & -6 \\
-6 & 3 & -8 \\
1 & 6 & 0 \\
8 & 9 & 0
\end{array} \right)$$

$$\begin{pmatrix}
94 & -48 & 75 \\
-62 & 51 & -46 \\
21 & -20 & -1
\end{pmatrix}
\qquad
\begin{pmatrix}
-8 & -3 & -4 & | & -5 \\
-5 & -9 & -9 & | & -3
\end{pmatrix}$$

$$\begin{pmatrix} 25 & 80 & -34 & -78 \\ 96 & 84 & 86 & -41 \end{pmatrix} \begin{pmatrix} -222 & 26 & -181 & 108 & 130 & 5 \\ 796 & -888 & -212 & -838 & 650 & 4 \\ 115 & 889 & 394 & 493 & -2 & -4 \\ -635 & 671 & 168 & 454 & -565 & -6 \\ -337 & -220 & 598 & 250 & 284 & 5 \end{pmatrix}$$

$$\begin{pmatrix}
38 & -95 & -20 \\
-75 & 35 & 94 \\
-11 & -6 & -48 \\
-81 & -51 & -54 \\
48 & 16 & 54
\end{pmatrix}$$

$$\begin{vmatrix}
3 & -8 \\
3 & -2
\end{vmatrix}$$

$$\begin{vmatrix} -48 & 36 & 86 & -83 \\ -40 & -85 & -3 & -5 \\ -40 & -69 & -58 & -58 \\ -66 & -9 & 42 & -83 \end{vmatrix} \begin{pmatrix} 69 & -8 & 67 & -77 \\ 76 & -22 & 95 & 35 \\ -98 & -83 & -46 & 59 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
68 & -528 & -930 & 725 & -131 \\
56 & -82 & 278 & 532 & -842
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
3 & 6 & \\
9 & 8 & \\
\end{array}\right|$$

$$\begin{pmatrix}
86 & 9 & 23 & -8 & -52 & | & -58 \\
34 & 21 & -6 & -79 & 34 & | & -2 \\
74 & 7 & -5 & -91 & -90 & | & 82
\end{pmatrix}$$

$$\begin{pmatrix}
96 & -17 & 27 \\
62 & 72 & 52
\end{pmatrix} \qquad \begin{pmatrix}
-3 & -8 & -7 & -4 \\
4 & 4 & -4 & -5 \\
9 & -6 & -9 & -3
\end{pmatrix}$$

$$\begin{pmatrix}
4 & -4 & -5 & 6 & 0 & | & -2 \\
4 & 9 & -4 & 4 & 0 & | & 4 \\
9 & -6 & 5 & -1 & 4 & | & 7
\end{pmatrix} \qquad
\begin{pmatrix}
9 & 1 & | & -8 \\
-2 & -9 & | & 5
\end{pmatrix}$$

$$\begin{pmatrix} -5 & 2 \\ 1 & 5 \\ 1 & 4 \\ 5 & 5 \end{pmatrix} \qquad \begin{pmatrix} 80 & -63 & -64 \\ 19 & -44 & 37 \end{pmatrix}$$

$$\begin{pmatrix}
31 & -62 & 24 & | & -29 \\
-99 & 81 & 22 & | & 11 \\
64 & 92 & -97 & | & -40
\end{pmatrix}
\begin{vmatrix}
98 & 70 & 4 & 6 \\
-42 & 86 & 6 & 85 \\
61 & -20 & 0 & -55 \\
30 & 2 & -80 & -63
\end{vmatrix}$$

$$\begin{pmatrix} -13 & 66 & 45 \\ -40 & -81 & 88 \\ -88 & 3 & -7 \end{pmatrix} \begin{pmatrix} 16 & -55 & -43 & -86 & -66 & 34 \\ -88 & -60 & -26 & -16 & -53 & 99 \\ 45 & 74 & -57 & -66 & 82 & -26 \end{pmatrix}$$

$$\begin{vmatrix}
 -1 & 5 & -5 \\
 9 & -6 & 2 \\
 3 & -9 & 4
 \end{vmatrix}
 = 
 \begin{pmatrix}
 -2 & -3 & 6 & 5 & | & -5 \\
 1 & -7 & -7 & 9 & | & 8
 \end{pmatrix}$$

$$\left(\begin{array}{cc}
-38 & -61 \\
-98 & -30
\end{array}\right) \qquad \left|\begin{array}{cc}
4 & 4 \\
2 & -2
\end{array}\right|$$

$$\begin{vmatrix}
-972 & 100 & -210 & 861 \\
174 & 879 & -141 & 355 \\
-22 & -821 & -680 & -583 \\
-691 & 622 & 102 & -540
\end{vmatrix} \begin{pmatrix} -9 & -2 & 8 & 6 & -1 \\
5 & -4 & -6 & -4 & -2 \end{pmatrix}$$

$$\begin{pmatrix}
-97 & -56 & -31 \\
-39 & -80 & -13 \\
-98 & 0 & 55 \\
-8 & -34 & 10 \\
84 & -25 & -83
\end{pmatrix}$$

$$\begin{vmatrix}
4 & 4 & 1 & -5 \\
2 & 3 & 2 & 5 \\
8 & 8 & 7 & -4 \\
1 & -4 & 1 & 7
\end{vmatrix}$$

$$\begin{pmatrix}
6 & 0 & -6 & | & -6 \\
-9 & 9 & 5 & | & -8 \\
7 & 9 & -3 & | & -8
\end{pmatrix}$$

$$\begin{pmatrix}
-8 & 1 & -5 \\
-3 & -7 & -5 \\
0 & 6 & -4 \\
6 & 8 & 8
\end{pmatrix}$$

$$\begin{vmatrix}
-8 & 8 \\
-1 & 8
\end{vmatrix} = \begin{pmatrix}
4 & 7 & -2 & 3 & -4 & 6 \\
-7 & -1 & 6 & 3 & 9 & -8 \\
8 & -5 & -3 & -9 & 6 & 7 \\
1 & 3 & 5 & 7 & -1 & 1 \\
-8 & 7 & 9 & 6 & -3 & -5
\end{pmatrix}$$

$$\begin{vmatrix}
-5 & 0 & -7 & 9 \\
-8 & 8 & -2 & -6 \\
8 & 1 & -6 & -4 \\
3 & 0 & -1 & -5
\end{vmatrix}$$

$$\begin{vmatrix}
-80 & -21 & 38 \\
33 & -2 & -59 \\
-28 & 69 & -86
\end{vmatrix}$$

$$\left(\begin{array}{cc|c}
-6 & 7 & -1 \\
4 & -4 & 7
\end{array}\right) \qquad \left(\begin{array}{cc|c}
60 & -78 & 76 & -68 \\
-16 & -82 & 12 & -88 \\
-86 & 96 & 71 & 22
\end{array}\right)$$

$$\begin{pmatrix} 5 & -3 & 8 & -9 \\ 7 & 2 & -9 & -8 \\ 4 & 7 & 7 & 8 \end{pmatrix} \qquad \begin{pmatrix} 20 & -76 & -30 & | & 6 \\ 22 & 34 & -64 & | & 22 \end{pmatrix}$$

$$\begin{pmatrix}
8 & -2 & 7 & 5 & 3 & 2 \\
3 & 4 & 4 & 7 & -3 & -2 \\
7 & -5 & 8 & 9 & 0 & 5 \\
7 & -3 & 8 & -4 & 9 & 7
\end{pmatrix}$$

$$\begin{pmatrix}
-7 & 6 & 8 \\
-7 & 1 & 7
\end{pmatrix}$$

$$\begin{vmatrix}
-96 & -86 & 13 \\
-80 & 50 & 4 \\
58 & 97 & 35
\end{vmatrix}$$

$$\begin{pmatrix}
7 & 6 & 7 & 3 \\
-7 & -1 & 3 & 9
\end{pmatrix}$$

$$\begin{pmatrix} -25 & -68 \\ -52 & -95 \\ -67 & 47 \end{pmatrix} \qquad \begin{pmatrix} -6 & -7 & -3 \\ 4 & 1 & 0 \end{pmatrix}$$

$$\begin{vmatrix}
-5 & 0 & -6 \\
4 & 6 & -2 \\
-5 & 5 & 8
\end{vmatrix}$$

$$\begin{vmatrix}
25 & 7 & 15 & 57 \\
36 & 97 & -49 & -49 \\
67 & -26 & -46 & 40 \\
56 & -75 & -94 & 6
\end{vmatrix}$$

$$\begin{pmatrix} -5 & -3 & -5 \\ -1 & 2 & 0 \\ -1 & -9 & -5 \\ -9 & 4 & 4 \end{pmatrix} \qquad \begin{pmatrix} 66 & -5 & 72 & 35 \\ -67 & 40 & 43 & -53 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-9 & 3 & 1 & 0 \\
5 & 2 & 4 & 6
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
49 & -18 & 63 \\
-4 & -85 & 81
\end{array}\right)$$

$$\begin{vmatrix}
-6 & 6 & -1 & 1 \\
1 & -3 & 8 & 6 \\
-1 & 1 & -9 & 4 \\
9 & -1 & -5 & -6
\end{vmatrix}$$

$$\begin{vmatrix}
68 & 86 & -86 \\
-3 & 35 & 97 \\
-71 & 42 & -10
\end{vmatrix}$$

$$\begin{vmatrix}
 7 & 2 & 5 \\
 8 & -8 & 8 \\
 -4 & 1 & 1
 \end{vmatrix}$$

$$\begin{pmatrix}
 82 & -67 & | & -43 \\
 29 & 19 & | & -55
 \end{pmatrix}$$

$$\begin{vmatrix}
0 & 2 & 6 \\
-9 & -7 & 6 \\
2 & 2 & -5
\end{vmatrix}
=
\begin{pmatrix}
5 & 2 & -3 & -5 & 4 & -7 \\
-8 & 1 & -5 & 0 & 6 & 1 \\
-6 & -9 & -7 & -4 & 4 & -7
\end{pmatrix}$$

$$\begin{pmatrix}
0 & -6 & -8 & | & -7 \\
-8 & -1 & -8 & | & -1 \\
-4 & 7 & 8 & | & -2
\end{pmatrix}$$

$$\begin{pmatrix}
0 & 3 & 3 & 8 \\
7 & -1 & 8 & -1
\end{pmatrix}$$

$$\begin{pmatrix}
1 & 3 & 5 & 3 \\
-1 & -1 & 0 & -6 \\
-3 & 7 & -3 & 3
\end{pmatrix}$$

$$\begin{vmatrix}
-9 & -6 & -8 & -4 \\
-3 & 5 & -1 & -5 \\
-9 & -3 & -3 & -4 \\
9 & -3 & 9 & 2
\end{vmatrix}$$

$$\left(\begin{array}{cc|c}
19 & -30 & -95 \\
-74 & 22 & -9
\end{array}\right) \qquad \left|\begin{array}{cc|c}
98 & -12 & -84 \\
12 & -75 & 2 \\
-62 & -70 & -27
\end{array}\right|$$

$$\begin{pmatrix}
12 & 413 & 554 & -56 \\
355 & -886 & 757 & 885 \\
-189 & -666 & 504 & -465 \\
42 & -989 & 889 & -322
\end{pmatrix}$$

$$\begin{pmatrix}
-2 & 2 & 8 \\
-3 & 9 & 0
\end{pmatrix}$$

$$\begin{vmatrix} 71 & 63 & 15 & 62 \\ -29 & -81 & -26 & -28 \\ 73 & 33 & 13 & 83 \\ 68 & -32 & -50 & 83 \end{vmatrix} \qquad \begin{pmatrix} 1 & 5 & 6 & | & -6 \\ 8 & 6 & -3 & | & 5 \\ 6 & 8 & -5 & | & 1 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
20 & 34 & 28 \\
-72 & -59 & -18
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
9 & -1 & 8 & 6 \\
-6 & -6 & -3 & -6 \\
-6 & 9 & 8 & 8
\end{array}\right)$$

$$\begin{pmatrix}
-2 & -7 & 1 & 9 & | & -7 \\
-6 & 2 & 1 & 7 & | & -4
\end{pmatrix}$$

$$\begin{pmatrix}
3 & 7 \\
-7 & 6
\end{pmatrix}$$

$$\begin{pmatrix}
0 & 7 & 3 & -6 & | & -8 \\
9 & 0 & 5 & -5 & | & -1 \\
-9 & -3 & -7 & -9 & | & 2
\end{pmatrix} \qquad \begin{pmatrix}
-82 & 22 \\
53 & -19 \\
-98 & 85
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-8 & 5 & 6 & 3 & -6 & -9 \\
9 & -9 & -7 & -4 & -2 & -8
\end{array}\right)
\left|\begin{array}{ccc|c}
-75 & 13 & -29 & -87 \\
60 & 18 & -70 & -84 \\
-30 & 24 & 90 & -11 \\
-23 & 34 & 41 & 57
\end{array}\right|$$

$$\begin{pmatrix}
-2 & -8 \\
8 & 8
\end{pmatrix} \qquad \qquad \begin{pmatrix}
-491 & 432 \\
959 & -398
\end{pmatrix}$$

$$\begin{vmatrix}
9 & 0 & -5 \\
-8 & 0 & 1 \\
0 & 4 & -7
\end{vmatrix}$$

$$\begin{pmatrix}
-6 & 8 & | -7 \\
-2 & 1 & | 0
\end{pmatrix}$$

$$\begin{pmatrix}
-255 & 920 \\
-843 & 562 \\
626 & 660 \\
873 & -520 \\
625 & -658
\end{pmatrix} \qquad \begin{pmatrix}
37 & 37 & | & 17 \\
94 & -40 & | & 1
\end{pmatrix}$$

$$\begin{pmatrix} -376 & 68 & 345 \\ 20 & -528 & 388 \\ -398 & 274 & 907 \end{pmatrix} \qquad \begin{pmatrix} -6 & -1 \\ 1 & -9 \end{pmatrix}$$

$$\left(\begin{array}{cc} -2 & -6 \\ -9 & -7 \end{array}\right) \qquad \left|\begin{array}{cc} -9 & -5 \\ 9 & -5 \end{array}\right|$$

$$\begin{vmatrix}
11 & -18 \\
39 & 83
\end{vmatrix}$$

$$\begin{vmatrix}
-9 & 2 & 3 & 7 \\
1 & 1 & 0 & 3 \\
-8 & 4 & -6 & 6 \\
-8 & 1 & 9 & -3
\end{vmatrix}$$

$$\begin{pmatrix}
12 & 84 & -14 & -67 & -31 \\
-40 & 98 & -97 & 97 & 98 \\
-11 & -45 & -48 & 11 & -27
\end{pmatrix}
\qquad
\begin{pmatrix}
3 & -8 \\
6 & 0 \\
5 & 2 \\
-9 & -2
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
8 & -6 & -4 & 9 \\
-7 & 3 & 5 & 2 \\
4 & 7 & -1 & 0
\end{array}\right)$$

$$\left|\begin{array}{ccc|c}
3 & 9 & -4 & 6 \\
5 & 0 & 9 & 5 \\
8 & -7 & -9 & -4 \\
4 & 9 & -8 & 9
\end{array}\right|$$

$$\begin{vmatrix} 9 & -4 \\ -2 & 5 \end{vmatrix} \begin{vmatrix} -78 & -44 & -19 & -61 & 15 \\ -56 & 22 & -32 & 1 & -53 & 41 \\ -43 & -45 & 76 & -85 & -80 & -97 \\ -3 & 29 & -25 & 92 & -33 & -20 \\ 59 & -67 & -20 & -49 & 3 & -64 \end{vmatrix}$$

$$\left(\begin{array}{ccc}
22 & -77 \\
5 & -76
\end{array}\right) \qquad \left(\begin{array}{cccc}
-7 & -98 & 15 \\
60 & 7 & 51 \\
30 & -93 & 45
\end{array}\right)$$

$$\begin{pmatrix} -79 & -1 \\ -32 & -54 \\ 1 & -45 \\ 6 & 25 \end{pmatrix} \qquad \begin{pmatrix} 8 & 39 \\ 7 & -38 \end{pmatrix}$$

$$\begin{vmatrix}
-1 & -89 & -50 \\
64 & -89 & -69 \\
-57 & -95 & -86
\end{vmatrix} = \begin{pmatrix}
-58 & 58 & -29 & -63 \\
-68 & 68 & -76 & -28 \\
-20 & -96 & -78 & 37 \\
84 & -56 & -60 & -63 \\
-66
\end{vmatrix} - 87$$

$$\left(\begin{array}{ccc|c}
-6 & 5 & -5 & 6 \\
-7 & 4 & 1 & 2
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-44 & 33 & -16 \\
29 & -40 & -79
\end{array}\right)$$

$$\left(\begin{array}{ccc|c}
1 & -1 & -5 & -9 & -9 \\
-6 & 2 & 8 & -2 & 0
\end{array}\right) \quad \left(\begin{array}{ccc|c}
22 & -2 & 46 \\
-89 & 57 & -18 \\
75 & 86 & 57 \\
68 & 38 & 16
\end{array}\right)$$

$$\left(\begin{array}{cc|c}
26 & 15 & -41 \\
83 & -62 & 41
\end{array}\right) \qquad \left|\begin{array}{cc|c}
14 & 66 & -97 \\
-66 & 41 & -7 \\
-62 & 38 & 68
\end{array}\right|$$

$$\left(\begin{array}{cccc}
3 & -2 & 9 \\
-7 & -7 & -4
\end{array}\right) \qquad \left(\begin{array}{ccccc}
9 & 4 & 3 & 5 \\
9 & -9 & -6 & 5 \\
-7 & 3 & 8 & 9
\end{array}\right)$$

$$\left(\begin{array}{cccc}
0 & -8 & 9 & 9 \\
9 & 7 & 0 & -7
\end{array}\right) \qquad \left(\begin{array}{cccc}
0 & 2 & 6 \\
-1 & -5 & -3 \\
3 & -8 & 3 \\
3 & 4 & 1
\end{array}\right)$$

$$\begin{pmatrix}
55 & 52 \\
-74 & 66
\end{pmatrix}
\qquad
\begin{pmatrix}
-73 & 30 & -82 & 49 \\
-53 & 95 & -51 & -89 \\
-94 & 82 & 34 & -73
\end{pmatrix}$$

$$\begin{pmatrix}
27 & 70 & -43 & 44 \\
-69 & -45 & 35 & 76 \\
-99 & 62 & 82 & 80
\end{pmatrix}$$

$$\begin{pmatrix}
-3 & -3 & 2 \\
0 & -4 & -2
\end{pmatrix}$$

$$\begin{pmatrix} -83 & 29 & -69 & 23 & -71 & | & -34 \\ -31 & -44 & 60 & 51 & 12 & | & 9 \\ -90 & 35 & 97 & 24 & -67 & | & 46 \\ 45 & -52 & 5 & 27 & -3 & | & -58 \\ 86 & 96 & -56 & 24 & -92 & | & -34 \end{pmatrix} \begin{pmatrix} 83 & 85 \\ -79 & -80 \\ 9 & 45 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
5 & 9 & 7 & 0 \\
9 & -7 & 2 & -9 \\
-5 & -3 & 1 & 7
\end{array}\right) \qquad
\left(\begin{array}{ccc|c}
8 & 0 & 3 & -7 & -5 \\
1 & -4 & -6 & -3 & -7 \\
3 & 4 & 6 & 6 & 0 \\
5 & -7 & -6 & 8 & -1
\end{array}\right)$$

$$\begin{pmatrix} 139 & -770 & -461 \\ -510 & -70 & 81 \\ -196 & 487 & -934 \\ -204 & -697 & -67 \end{pmatrix} \begin{pmatrix} -9 & 6 & -2 & 6 & -6 & -5 \\ 3 & -5 & -5 & -6 & -8 & 9 \\ -2 & 9 & -6 & -8 & 0 & -9 \\ 3 & 2 & -5 & 2 & 2 & -9 \\ 1 & -1 & 4 & 5 & 0 & -5 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c} -4 & 3 & -6 & 3 & 7 \\ -2 & -9 & 4 & 4 & 9 \end{array}\right) \quad \left(\begin{array}{ccc|c} -6 & 5 & 2 & -9 \\ -7 & -7 & -7 & 3 \end{array}\right)$$

$$\left(\begin{array}{ccc|c}
71 & -44 & -97 & -66 \\
-82 & -59 & -39 & 22 \\
20 & 20 & 96 & -98
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
-1 & -5 & 4 & -8 \\
9 & -7 & 0 & -2 \\
4 & 2 & 0 & 4 \\
2 & -7 & 1 & 9
\end{array}\right|$$

$$\begin{vmatrix} 5 & -7 & 7 & -5 \\ -9 & 8 & 7 & -4 \\ -6 & -1 & -5 & 2 \\ 4 & -6 & -6 & -2 \end{vmatrix} \begin{pmatrix} -74 & -112 & -504 & -833 & 619 \\ -730 & -638 & -315 & 303 & -593 \\ 105 & 708 & 135 & -746 & -733 \end{pmatrix}$$

$$\begin{vmatrix}
28 & -7 & 63 \\
53 & -69 & -9 \\
16 & -38 & -63
\end{vmatrix}
\qquad
\begin{pmatrix}
-3 & -4 & 9 & 6 & | & -3 \\
9 & 3 & -4 & -9 & | & -4 \\
7 & 7 & 4 & 2 & | & 4
\end{pmatrix}$$

$$\begin{vmatrix} 46 & -47 \\ 35 & -65 \end{vmatrix} \qquad \begin{pmatrix} -12 & 62 & 93 \\ -60 & -9 & -97 \\ 12 & 52 & 71 \\ 64 & 60 & -91 \end{pmatrix}$$

$$\begin{vmatrix}
2 & -9 \\
9 & 4
\end{vmatrix}$$

$$\begin{vmatrix}
-6 & 2 & -5 & -5 \\
8 & -5 & 1 & -6 \\
-2 & 1 & 6 & -6 \\
-4 & -5 & -8 & -1
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
-4 & -8 & -8 \\
-7 & 2 & 2
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
4 & 8 & -1 & -7 & -3 \\
2 & 7 & 8 & 3 & 3 \\
8 & 3 & -3 & 6 & 3
\end{array}\right)$$

$$\begin{vmatrix}
83 & -5 \\
-7 & 81
\end{vmatrix}$$

$$\begin{vmatrix}
417 & -20 & -597 \\
707 & 164 & 645 \\
853 & 709 & -704
\end{vmatrix}$$

$$\begin{pmatrix}
74 & -54 & -96 & -2 & 34 \\
68 & 36 & 75 & 45 & 55 \\
2 & 25 & -77 & -29 & 58 \\
08 & 81 & 43 & 46 & 55
\end{pmatrix}
\begin{vmatrix}
-4 & -7 & 2 \\
5 & -1 & 8 \\
-5 & 8 & 0
\end{vmatrix}$$

$$\begin{pmatrix}
0 & 4 & 9 & -2 & 0 & 1 \\
-3 & -5 & -5 & 3 & 0 & 8 \\
5 & 8 & -3 & -6 & -9 & -1 \\
7 & -1 & -7 & 7 & 3 & -2 \\
6 & 8 & 2 & 8 & -7 & 4
\end{pmatrix}$$

$$\begin{pmatrix}
-8 & 2 \\
4 & 4
\end{pmatrix}$$

$$\begin{pmatrix}
2 & -4 \\
5 & -6 \\
-9 & 6
\end{pmatrix}
\qquad
\begin{vmatrix}
8 & 7 & -1 \\
7 & 5 & 7 \\
-3 & -1 & -5
\end{vmatrix}$$

$$\left(\begin{array}{cc|c}
3 & -6 & 2 \\
-1 & 3 & -5
\end{array}\right) \qquad \left(\begin{array}{cc|c}
25 & 69 & -27 \\
-22 & -60 & -28
\end{array}\right)$$

$$\begin{pmatrix}
-9 & -5 \\
0 & 0 \\
5 & -6
\end{pmatrix}$$

$$\begin{vmatrix}
4 & 5 & -6 & 2 \\
3 & 7 & -9 & 9 \\
-9 & -6 & 9 & -9 \\
-5 & -3 & 9 & 1
\end{vmatrix}$$

$$\begin{pmatrix} 64 & -12 \\ -57 & 42 \\ 87 & -57 \end{pmatrix} \qquad \begin{pmatrix} 2 & -69 & 79 \\ 59 & -40 & 94 \end{pmatrix}$$

$$\left|\begin{array}{ccc} 5 & 6 \\ -3 & 3 \end{array}\right| \qquad \left(\begin{array}{ccc} 9 & -1 & 2 \\ 7 & 4 & -8 \end{array}\right)$$

$$\begin{vmatrix}
9 & 3 \\
-4 & 2
\end{vmatrix}$$

$$\begin{pmatrix}
-2 & -4 & -7 \\
-7 & 1 & 6
\end{pmatrix}$$

$$\begin{vmatrix}
 -2 & -2 \\
 -5 & -3
 \end{vmatrix}$$

$$\begin{pmatrix}
 18 & 13 & -9 & 54 \\
 87 & 53 & 78 & -24
 \end{pmatrix}$$

$$\begin{pmatrix}
-5 & 8 & -8 & 3 \\
-8 & 4 & 5 & -5 \\
-2 & -5 & -1 & 8 \\
-5 & 3 & 2 & 0 \\
-3 & 9 & 2 & 0
\end{pmatrix}$$

$$\begin{pmatrix}
-8 & 7 & -5 & | & -7 \\
1 & 5 & 8 & | & 8 \\
9 & -4 & 8 & | & 4
\end{pmatrix}$$

$$\begin{pmatrix}
8 & 7 & -5 \\
-6 & 4 & -9 \\
-9 & 1 & -7
\end{pmatrix}$$

$$\begin{vmatrix}
-9 & 8 & -7 \\
8 & -4 & 8 \\
9 & -9 & 3
\end{vmatrix}$$

$$\begin{vmatrix}
866 & -328 & -497 \\
-449 & 375 & 816 \\
121 & -838 & -562
\end{vmatrix}
\qquad \left(\begin{array}{c}
0 & 1 \\
9 & 1
\end{array}\right)$$

$$\left(\begin{array}{ccc}
7 & -3 & -9 \\
-8 & 3 & -7
\end{array}\right) \qquad \left(\begin{array}{ccc}
-6 & 55 \\
5 & -18
\end{array}\right)$$

$$\begin{pmatrix} -2 & 7 & -5 & -1 & -4 \\ -2 & 8 & -1 & -6 & -7 \end{pmatrix} \begin{pmatrix} -92 & -97 & 49 & 59 & | & 40 \\ 29 & 63 & -94 & 22 & | & -22 \\ -66 & 10 & -97 & 65 & | & 32 \\ 83 & -32 & -97 & -98 & | & -74 \end{pmatrix}$$

$$\begin{pmatrix} 57 & 5 & 30 & 67 & -48 \\ -39 & 67 & -35 & -15 & -74 \\ 63 & -93 & 0 & 37 & 87 \\ -69 & -36 & 57 & 73 & 16 \\ 42 & -97 & -29 & -64 & -39 \end{pmatrix} \begin{vmatrix} -2 & -6 & 7 & 0 \\ 6 & 1 & 1 & -4 \\ -6 & 1 & -9 & 1 \\ 8 & 8 & 8 & -1 \end{vmatrix}$$

$$\left(\begin{array}{cccc} 2 & -5 & 0 \\ 7 & 4 & -6 \end{array}\right) \qquad \left(\begin{array}{ccccc} 6 & -4 & -6 & -3 & -1 \\ 3 & -6 & 0 & 8 & 8 \end{array}\right)$$

$$\begin{vmatrix}
5 & 9 \\
-2 & -9
\end{vmatrix}
\qquad
\begin{pmatrix}
-1 & 4 & -6 & 2 \\
-7 & -3 & -7 & -7 \\
-7 & 8 & -9 & 2 \\
-9 & -6 & -3 & 0
\end{pmatrix}$$

$$\begin{pmatrix} -144 & -187 & 886 & 633 & -697 \\ 116 & 782 & -321 & 900 & 758 \\ -479 & -199 & 847 & -283 & -22 \end{pmatrix} \begin{pmatrix} -45 & 8 & -10 & 53 \\ -44 & -55 & 74 & 46 \end{pmatrix}$$

$$\begin{vmatrix}
31 & 0 \\
98 & -43
\end{vmatrix}$$

$$\begin{vmatrix}
-653 & -946 \\
754 & -630
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
-29 & 64 & 36 \\
0 & -60 & 68
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
41 & -39 & -45 \\
-74 & 84 & 34
\end{array}\right)$$

$$\begin{pmatrix} -24 & 27 \\ 37 & 92 \end{pmatrix} \qquad \begin{pmatrix} -501 & -877 & | & -377 \\ -455 & -204 & | & 849 \end{pmatrix}$$

$$\begin{pmatrix}
-5 & -3 & -7 & 4 \\
-6 & 3 & 0 & -3 \\
-3 & -3 & 1 & 7
\end{pmatrix}$$

$$\begin{vmatrix}
-13 & -75 & -2 & -49 \\
81 & -13 & 74 & -1 \\
95 & -62 & 68 & -29 \\
86 & 20 & 83 & 39
\end{vmatrix}$$

$$\begin{pmatrix}
7 & -8 \\
0 & -4 \\
9 & -4 \\
-7 & 7 \\
-6 & -8
\end{pmatrix}$$

$$\begin{pmatrix}
5 & 8 & 1 & | & -7 \\
-2 & 0 & -5 & | & 5
\end{pmatrix}$$

$$\begin{vmatrix}
-3 & -7 & -3 & 7 \\
5 & 8 & -6 & -5 \\
-4 & -8 & 6 & -4 \\
9 & 2 & 5 & 8
\end{vmatrix} \qquad \begin{pmatrix}
-80 & -34 & 37 & 80 \\
18 & -75 & 80 & 21 \\
-57 & 79 & 5 & 13
\end{pmatrix}$$

$$\begin{vmatrix}
8 & 9 & -5 \\
1 & -1 & -5 \\
-4 & -1 & -5
\end{vmatrix}$$

$$\begin{vmatrix}
-7 & -8 & 1 \\
4 & -4 & 4 \\
-8 & 4 & -8
\end{vmatrix}$$

$$\begin{pmatrix}
-7 & 3 & 9 & 4 & -7 \\
8 & -9 & -3 & 2 & 5 \\
-1 & -8 & 9 & 2 & 8
\end{pmatrix}
\qquad
\begin{pmatrix}
-27 & -34 \\
8 & 65
\end{pmatrix}$$

$$\begin{vmatrix}
44 & 79 & 78 \\
-7 & 3 & -55 \\
-75 & -15 & -18
\end{vmatrix}
\qquad
\begin{pmatrix}
4 & -1 & -3 & 0 & 7 & | & -7 \\
-8 & 2 & 3 & 0 & 3 & | & 6
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
25 & 26 & 75 & -15 \\
5 & 46 & -83 & 98 \\
-7 & 15 & -76 & 98
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-7 & 9 & -1 \\
-5 & -1 & 5 \\
-6 & -3 & -6
\end{array}\right)$$

$$\begin{vmatrix}
 -7 & -5 & 4 \\
 4 & -4 & -6 \\
 1 & 9 & 2
 \end{vmatrix}
 = 
 \begin{vmatrix}
 9 & 5 & -2 \\
 -9 & 2 & 3 \\
 -2 & 2 & -9 \\
 -5 & 3 & 8 \\
 9 & -1 & 4
 \end{vmatrix}$$

$$\left(\begin{array}{cc|c}
97 & 7 & -50 \\
7 & 34 & -72
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-30 & 91 & 53 \\
50 & -72 & -28
\end{array}\right)$$

$$\begin{pmatrix}
-3 & 2 \\
1 & 0 \\
3 & 9
\end{pmatrix} \qquad \qquad \begin{pmatrix}
-9 & -2 & | & 4 \\
-3 & 8 & | & -1
\end{pmatrix}$$

$$\begin{pmatrix}
-44 & 84 & 51 & -77 & 17 & | & -11 \\
-3 & 72 & -9 & -23 & 89 & | & 26 \\
98 & 29 & -96 & 24 & -15 & | & 72
\end{pmatrix}
\begin{vmatrix}
-31 & -34 & -37 & -84 \\
69 & 58 & 45 & -74 \\
72 & 58 & 72 & 67 \\
-55 & -31 & -28 & -46
\end{vmatrix}$$

$$\begin{pmatrix} -54 & 99 \\ -37 & -45 \\ 42 & 97 \\ -57 & 98 \\ -44 & -31 \end{pmatrix} \qquad \begin{vmatrix} -46 & 67 & 45 & 87 \\ 85 & 28 & -18 & -83 \\ -48 & -81 & -1 & -19 \\ 94 & -80 & 72 & -56 \end{vmatrix}$$

$$\begin{vmatrix}
 9 & 7 & 8 \\
 0 & 7 & 7 \\
 2 & -7 & -2
 \end{vmatrix}
 \qquad \begin{pmatrix}
 -991 & -192 \\
 321 & 594
 \end{pmatrix}$$

$$\begin{pmatrix}
-3 & 9 \\
-5 & -1
\end{pmatrix} \qquad \qquad \begin{vmatrix}
45 & 63 \\
42 & -76
\end{vmatrix}$$

$$\left(\begin{array}{ccccc} 2 & -74 & -3 & 91 \\ 34 & 40 & -61 & 69 \end{array}\right) \left(\begin{array}{ccccc} -4 & 3 & 5 & -6 & -3 & 2 \\ 6 & -2 & -1 & -8 & 6 & 5 \end{array}\right)$$

$$\begin{pmatrix}
85 & 78 \\
-28 & 22 \\
-37 & -40 \\
7 & 57 \\
8 & -92
\end{pmatrix}$$

$$\begin{vmatrix}
53 & -64 & -85 & -24 \\
38 & -85 & 7 & -55 \\
-30 & 39 & 63 & 24 \\
76 & 41 & -88 & 89
\end{vmatrix}$$

$$\begin{vmatrix}
987 & 939 \\
740 & -74
\end{vmatrix}
\qquad
\left(
\begin{array}{ccc|c}
-230 & -387 & -724 & 28 \\
570 & 877 & -193 & 137
\end{array}
\right)$$

$$\begin{vmatrix}
 2 & 2 & 5 \\
 6 & 5 & 8 \\
 -3 & 0 & -1
 \end{vmatrix}
 \qquad \begin{pmatrix}
 -4 & 7 \\
 -9 & 5
 \end{pmatrix}$$

$$\begin{pmatrix} -43 & -71 & -7 & 14 & -61 & -83 \\ -83 & 69 & -42 & 17 & -26 & 59 \\ 36 & 43 & -37 & -60 & 80 & 67 \\ 80 & 39 & 17 & 23 & -72 & 65 \\ -17 & -55 & 96 & 66 & -85 & -53 \end{pmatrix} \begin{pmatrix} 8 & 96 \\ 2 & -1 \\ -22 & 9 \\ -18 & -53 \end{pmatrix}$$

$$\begin{vmatrix}
78 & 51 & -56 & -27 \\
93 & -41 & 53 & 71 \\
9 & 28 & 58 & 74 \\
-85 & -20 & 0 & 8
\end{vmatrix}$$

$$\begin{pmatrix}
2 & 5 & 7 & -3 \\
2 & 0 & -6 & 9 \\
-6 & 1 & -1 & -5
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
6 & 3 & -4 & 3 \\
3 & 2 & -9 & -9
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
67 & -38 & -75 & -49 \\
-60 & 56 & 51 & 10
\end{array}\right)$$

$$\begin{pmatrix}
26 & 27 & -7 & 42 & 1 \\
37 & -30 & 33 & 18 & 60 \\
-63 & -8 & -44 & 85 & -54 \\
34 & -78 & -14 & -9 & -71
\end{pmatrix}$$

$$\begin{pmatrix}
-46 & 2 \\
45 & 39
\end{pmatrix}$$

$$\begin{pmatrix} -10 & -839 & -567 & | & -864 \\ 109 & -748 & 954 & | & 148 \\ -895 & 644 & 846 & | & 998 \end{pmatrix} \begin{pmatrix} -368 & -258 & -672 & -500 \\ -955 & 814 & -720 & 107 \\ -665 & 46 & 383 & -4 \\ -972 & -390 & -621 & -226 \end{pmatrix}$$

$$\begin{pmatrix} 8 & 3 \\ -6 & 6 \end{pmatrix} \qquad \begin{pmatrix} 9 & -1 \\ 9 & -5 \\ -8 & -6 \\ -4 & 8 \\ 4 & 3 \end{pmatrix}$$

$$\begin{pmatrix} -70 & -73 & -34 & -70 & -82 & 84 \\ -99 & -97 & -74 & 83 & 39 & -64 \\ 52 & 75 & -44 & -29 & 63 & 86 \end{pmatrix} \begin{pmatrix} -55 & -2 & -71 & 54 \\ 99 & 2 & -74 & -51 \\ 39 & -13 & -95 & 32 \end{pmatrix}$$

$$\begin{pmatrix}
-81 & 61 \\
-86 & -32
\end{pmatrix}
\qquad
\begin{pmatrix}
-1 & -7 & -9 & | & 4 \\
-4 & 0 & -7 & | & 2 \\
0 & -3 & -3 & | & -4
\end{pmatrix}$$

$$\left(\begin{array}{ccccc}
-6 & 8 & -7 & 3 & 3 \\
-3 & 2 & 5 & 0 & -7
\end{array}\right) \qquad \left|\begin{array}{ccccccc}
3 & -8 & 5 \\
1 & 2 & -9 \\
4 & 0 & 1
\end{array}\right|$$

$$\left| \begin{array}{ccc}
-55 & -30 \\
9 & 46
\end{array} \right| \qquad \left( \begin{array}{cccc}
-4 & -9 & -4 \\
7 & 8 & 8 \\
-8 & 6 & -8
\end{array} \right)$$

$$\begin{pmatrix}
7 & -8 & 0 & 6 \\
0 & 3 & -3 & 2 \\
-9 & 6 & -4 & -4 \\
-6 & -2 & 7 & 8
\end{pmatrix}
\qquad
\begin{pmatrix}
-32 & 44 \\
-53 & 84
\end{pmatrix}$$

$$\begin{pmatrix}
2 & -7 \\
-5 & -2 \\
6 & 5 \\
0 & 0 \\
6 & -8
\end{pmatrix}$$

$$\begin{pmatrix}
9 & 7 \\
-7 & 1 \\
-7 & -4
\end{pmatrix}$$

$$\begin{vmatrix} 40 & -58 & 57 & 75 \\ 88 & -18 & -36 & 68 \\ -96 & -6 & -37 & -49 \\ -16 & -24 & 55 & 77 \end{vmatrix} \qquad \begin{pmatrix} -26 & -9 \\ 42 & 21 \end{pmatrix}$$

$$\begin{vmatrix} 6 & -7 & 8 \\ -5 & -1 & -8 \\ -3 & 5 & -9 \end{vmatrix} = \begin{pmatrix} -25 & -30 & -88 & 64 & 93 \\ 49 & 38 & -47 & -22 & 59 \\ 70 & 36 & 57 & -44 & -56 \\ -51 & 48 & -8 & -27 & -7 \end{pmatrix}$$

$$\left| \begin{array}{ccc|c}
5 & -8 \\
-9 & 3
\end{array} \right| \qquad \left( \begin{array}{ccc|c}
-7 & 6 & 0 \\
7 & -6 & 9
\end{array} \right)$$

$$\left(\begin{array}{cccc|c}
-48 & -5 & 26 & 8 \\
-45 & -48 & 28 & 82
\end{array}\right)
\left(\begin{array}{cccc|c}
-7 & -6 & 4 & 0 & -3 & 0 \\
-5 & -9 & 7 & 1 & -8 & 6 \\
1 & -2 & -2 & -7 & -4 & -1 \\
7 & -9 & 2 & 5 & 4 & 4
\end{array}\right)$$

$$\begin{pmatrix}
0 & -2 & -5 \\
-6 & 6 & 5 \\
-7 & -3 & -5 \\
6 & 5 & -2
\end{pmatrix}
\begin{pmatrix}
-1 & 0 & -7 & 8 & -8 & -1 \\
3 & -8 & 5 & -7 & -1 & 3 \\
9 & -2 & -7 & 8 & 5 & -3 \\
7 & 1 & 6 & 5 & -3 & 3 \\
1 & 8 & -8 & -8 & 3 & -2
\end{pmatrix}$$

$$\left(\begin{array}{ccc}
-5 & -2 \\
4 & 49
\end{array}\right) \qquad \left|\begin{array}{cccc}
8 & -9 & -4 \\
-9 & 3 & -7 \\
-7 & -6 & -6
\end{array}\right|$$

$$\begin{vmatrix}
6 & 5 & 8 \\
-7 & 4 & -3 \\
-1 & -8 & -4
\end{vmatrix}$$

$$\begin{vmatrix}
-4 & -7 & 4 & 4 \\
4 & 3 & 2 & 5 \\
8 & 0 & -5 & 7 \\
3 & 1 & 6 & 2
\end{vmatrix}$$

$$\begin{pmatrix}
1 & 7 & -22 & | & -47 \\
32 & 96 & 21 & | & -61 \\
-8 & -10 & 89 & | & -70
\end{pmatrix}$$

$$\begin{pmatrix}
-8 & 9 & 2 \\
0 & 3 & 3
\end{pmatrix}$$

$$\begin{pmatrix} -16 & 163 \\ 151 & -152 \\ -783 & 31 \\ 88 & -664 \\ 340 & 255 \end{pmatrix} \qquad \begin{pmatrix} 5 & -2 & 6 & -1 & -7 & 8 \\ 1 & -7 & 9 & -1 & 9 & -8 \end{pmatrix}$$

$$\begin{vmatrix}
-38 & 65 \\
-3 & 63
\end{vmatrix}
\qquad \begin{pmatrix}
-9 & -7 & -9 \\
8 & -1 & -6 \\
4 & 8 & 3
\end{pmatrix}$$

$$\begin{pmatrix} -8 & 730 & 548 & -848 \\ -926 & -420 & -951 & -397 \\ 297 & -509 & 542 & -890 \\ -498 & -523 & -499 & 781 \end{pmatrix} \begin{pmatrix} 2 & 2 & -8 & 8 & -7 \\ 7 & 7 & 7 & 0 & -3 \end{pmatrix}$$

$$\begin{pmatrix} 83 & -79 & -92 & 77 & -58 & 24 \\ 39 & 37 & 44 & 0 & -64 & 8 \\ 30 & 59 & 77 & 73 & 60 & -80 \\ 64 & 38 & 26 & 54 & -79 & -82 \\ 72 & -12 & 74 & 14 & 7 & -8 \end{pmatrix} \begin{pmatrix} 52 & 857 & -359 & 18 \\ -584 & 644 & 454 & -40 \\ -38 & -596 & -270 & -62 \end{pmatrix}$$

$$\begin{pmatrix}
-93 & -3 & -18 & 59 \\
21 & -88 & -78 & -51 \\
31 & -26 & -47 & 64
\end{pmatrix}
\begin{pmatrix}
1 & -3 & 4 & 2 & 0 & 3 \\
-1 & -8 & 6 & 7 & 1 & -9 \\
-8 & 8 & 9 & -2 & -5 & 5 \\
2 & -7 & 6 & 7 & 0 & 6
\end{pmatrix}$$

$$\begin{pmatrix} -39 & 99 & -36 & -39 & -29 & 37 \\ 25 & -27 & 76 & 74 & -30 & -23 \\ 52 & -35 & -66 & 86 & 96 & -25 \\ -33 & -2 & 7 & -32 & 60 & 0 \\ 71 & -48 & 87 & -90 & 34 & 16 \end{pmatrix} \begin{pmatrix} -8 & -1 & 7 & 6 & 2 \\ -3 & -2 & 6 & -2 & 1 \\ 1 & -3 & 5 & 8 & -5 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-7 & -6 & -9 & -1 & 4 & -3 \\
2 & -5 & -2 & 7 & 9 & 9
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
20 & -14 & -7 \\
-55 & -37 & 16 \\
76 & -51 & 12
\end{array}\right|$$

$$\begin{pmatrix} 7 & -2 & -5 \\ -4 & 4 & 3 \end{pmatrix} \begin{pmatrix} -20 & 16 & 59 & -34 & -65 & 34 \\ -44 & -50 & -22 & -65 & 69 & -95 \\ -74 & 6 & 2 & -96 & -71 & 5 \\ 80 & -24 & 43 & -60 & -43 & -81 \end{pmatrix}$$

$$\begin{vmatrix}
-4 & 6 & 3 & 7 \\
-1 & 7 & 5 & -7 \\
-9 & 2 & -3 & -1 \\
-8 & 4 & 7 & 1
\end{vmatrix}$$

$$\begin{pmatrix}
-7 & -7 & 7 \\
3 & -7 & 1
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c} 14 & 543 & 17 & -73 & -213 \\ 677 & -380 & -935 & -286 & 979 \end{array}\right) \left(\begin{array}{ccc|c} -3 & 9 & 6 & 6 & -3 & -4 \\ 6 & -9 & 2 & 6 & 2 & 2 \\ 0 & 7 & 5 & 0 & -2 & 9 \end{array}\right)$$

$$\begin{pmatrix} -56 & -71 & -29 & -77 & 50 & | & 10 \\ -14 & 73 & -42 & 78 & 38 & | & 32 \\ -19 & 26 & 38 & 88 & -83 & | & -30 \\ -81 & 45 & -39 & -73 & -61 & | & 72 \\ -25 & 41 & -44 & -74 & -92 & | & 77 \end{pmatrix} \begin{pmatrix} -38 & 68 \\ -35 & 82 \\ -15 & 57 \\ -34 & -96 \\ -57 & 74 \end{pmatrix}$$

$$\begin{pmatrix}
90 & -61 & 36 & 8 & 92 & | & -43 \\
-24 & -12 & -3 & -42 & -1 & | & 93
\end{pmatrix} \qquad \begin{vmatrix}
1 & 67 & | \\
69 & 27 & |
\end{vmatrix}$$

$$\begin{vmatrix}
-5 & 0 & -7 & 1 \\
9 & -3 & -4 & 7 \\
-3 & -1 & 2 & -5 \\
8 & -1 & -5 & -3
\end{vmatrix}$$

$$\begin{pmatrix}
49 & -59 & 13 \\
-2 & -51 & -93 \\
27 & -11 & -34
\end{pmatrix}$$

$$\left(\begin{array}{ccc|ccc|c}88 & 43 & -36 & -41 & 93 & 41\\25 & -62 & -72 & 57 & -46 & 80\end{array}\right) \left(\begin{array}{ccc|c}2 & 5 & -4\\-3 & -8 & 9\end{array}\right)$$

$$\begin{pmatrix} -14 & -80 & 52 & 38 & | & -66 \\ 20 & -30 & 14 & -61 & | & 96 \\ -99 & -63 & -50 & -2 & | & -22 \\ -75 & 31 & -7 & 70 & | & -69 \end{pmatrix} \begin{pmatrix} 0 & 44 & 97 \\ 12 & -19 & -90 \\ 14 & 93 & -29 \\ -55 & -42 & 82 \end{pmatrix}$$

$$\begin{pmatrix} -7 & 0 & -9 & 8 \\ -5 & -3 & 8 & 5 \\ 4 & -9 & -5 & 7 \end{pmatrix} \qquad \begin{pmatrix} -6 & -8 \\ 8 & 6 \end{pmatrix}$$

$$\begin{vmatrix}
1 & -4 & -3 \\
-7 & 0 & -3 \\
3 & 4 & -9
\end{vmatrix}$$

$$\begin{vmatrix}
79 & 30 \\
26 & -3
\end{vmatrix}$$

$$\left(\begin{array}{ccc}
-7 & 1 \\
3 & 6
\end{array}\right) \qquad \left|\begin{array}{cccc}
-14 & 63 & 22 \\
-10 & -60 & -94 \\
72 & 64 & -6
\end{array}\right|$$

$$\begin{pmatrix} -3 & 5 & 8 \\ -7 & 2 & -6 \\ 5 & -2 & 9 \\ 8 & 2 & -2 \\ 6 & 8 & -3 \end{pmatrix} \qquad \begin{pmatrix} -968 & 211 & 543 \\ 386 & 434 & -258 \\ -753 & 839 & -140 \\ 695 & 441 & 824 \end{pmatrix}$$

$$\left(\begin{array}{cc|cc|c} 63 & -58 & -57 \\ 20 & -13 & 6 \end{array}\right) \left(\begin{array}{cc|cc|c} -22 & -79 & 80 & -63 & -29 \\ 5 & -14 & -90 & 87 & -63 \end{array}\right)$$

$$\left(\begin{array}{ccc|c} -9 & -2 & 9 & -2 & 4 \\ 6 & 1 & 5 & -3 & -6 \end{array}\right) \left(\begin{array}{ccc|c} 284 & -256 & 188 & -478 & -99 \\ 502 & 58 & -521 & 419 & 127 \end{array}\right)$$

$$\begin{vmatrix} -39 & -23 & -24 & -50 \\ 89 & 30 & -11 & -26 \\ 41 & 43 & -46 & 54 \\ -10 & -63 & 33 & 65 \end{vmatrix} \begin{vmatrix} -48 & 85 & -68 & -6 & | & -45 \\ 14 & 85 & -15 & -90 & | & -43 \\ 74 & -32 & -14 & -41 & | & 12 \\ 42 & -94 & 96 & 96 & | & 48 \end{vmatrix}$$

$$\left( \begin{array}{ccc|c} 7 & -6 & -8 & -5 & -4 \\ 2 & 3 & 9 & -2 & 0 \\ 1 & -4 & -6 & 7 & 7 \end{array} \right) \left( \begin{array}{ccc|c} -78 & -54 & -86 & -78 \\ 48 & -58 & 6 & -66 \end{array} \right)$$

$$\begin{pmatrix} 85 & -86 & -3 \\ 65 & -30 & 12 \\ 48 & -18 & -10 \end{pmatrix} \begin{pmatrix} 98 & -28 & -82 & 93 & 82 & 53 \\ -66 & 46 & -21 & -31 & -31 & -19 \\ -98 & 6 & 34 & 22 & 17 & -95 \end{pmatrix}$$

$$\begin{pmatrix}
95 & 46 & 27 & -7 & 11 \\
-74 & -13 & -7 & 82 & 80 \\
45 & 32 & -18 & 8 & -29
\end{pmatrix}
\begin{pmatrix}
2 & 8 & 6 & 2 \\
-6 & -1 & -4 & 4 \\
2 & 2 & -5 & 9 \\
-8 & 8 & -9 & -9 \\
-3 & -6 & -2 & -9
\end{pmatrix}$$

$$\begin{pmatrix} 2 & 1 & -3 \\ -2 & -5 & -8 \\ 9 & -6 & 9 \\ -4 & 1 & 5 \\ 0 & -1 & 3 \end{pmatrix} \qquad \begin{pmatrix} 79 & -45 & -53 & -30 \\ 75 & 35 & -5 & 6 \\ -88 & -8 & -7 & 22 \end{pmatrix}$$

$$\begin{pmatrix} -89 & 43 & 9 & 88 \\ 89 & -65 & 65 & 12 \\ -72 & -8 & -75 & 24 \end{pmatrix} \begin{pmatrix} -952 & 17 & 734 & -50 \\ -695 & 419 & -692 & 400 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
9 & 6 & 9 & -9 & | & -6 \\
-1 & 4 & 4 & 4 & | & -9 \\
3 & 8 & 9 & -4 & | & -6
\end{array}\right)
\left(\begin{array}{ccc|c}
-6 & 4 & 8 & -3 & | & 8 \\
1 & -4 & -3 & -9 & | & 9 \\
-3 & -4 & 3 & -4 & | & 7 \\
-2 & 3 & -6 & -1 & | & -9
\end{array}\right)$$

$$\left(\begin{array}{ccc|c}
-7 & -8 & 6 & 1 & 4 \\
1 & -6 & -6 & -9 & -8 \\
9 & -3 & -9 & -6 & -7
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
-3 & 3 \\
6 & -2
\end{array}\right|$$

$$\begin{pmatrix}
51 & 85 & -38 & 85 \\
48 & -49 & 72 & 22
\end{pmatrix}$$

$$\begin{vmatrix}
-64 & 50 & 67 & -53 \\
-12 & 64 & 31 & -81 \\
33 & -37 & 62 & 2 \\
-22 & -32 & -27 & 0
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
-5 & 3 & 2 & 4 \\
3 & 1 & 8 & 4
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-2 & 5 & 2 & -3 & -6 \\
-1 & -1 & 2 & -8 & 9 \\
8 & 4 & 7 & 7 & 2 \\
6 & 2 & -6 & -4 & -9
\end{array}\right)$$

$$\left(\begin{array}{ccc|c}
61 & 40 & -64 & 30 \\
-32 & -99 & -7 & -95
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
7 & -2 & -2 \\
-2 & 2 & 4
\end{array}\right)$$

$$\begin{vmatrix}
-2 & -8 \\
-6 & -5
\end{vmatrix}$$

$$\begin{pmatrix}
7 & -9 \\
-3 & 6 \\
2 & 1 \\
-5 & -9
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-9 & -8 & 3 & -1 & -2 \\
1 & 6 & 7 & 0 & -1
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
5 & -88 & 74 \\
-95 & 18 & 28
\end{array}\right)$$

$$\begin{vmatrix}
 0 & -1 \\
 -7 & -4
 \end{vmatrix}
 \begin{vmatrix}
 -87 & 35 \\
 7 & -46
 \end{vmatrix}$$

$$\begin{pmatrix} -3 & 5 & 9 & -6 & 8 & 0 \\ -4 & 8 & 4 & 2 & -9 & -5 \\ 2 & -2 & -5 & 9 & 4 & -4 \\ 8 & 6 & 3 & -1 & 4 & 8 \end{pmatrix} \begin{pmatrix} -926 & 580 & 671 & -186 \\ 185 & 67 & 639 & -502 \\ 27 & 207 & -179 & 852 \\ -327 & -505 & -139 & -58 \end{pmatrix}$$

$$\begin{vmatrix}
 -4 & 2 & -5 \\
 7 & 3 & -1 \\
 -2 & 9 & -7
 \end{vmatrix}
 \begin{vmatrix}
 6 & 3 & -9 \\
 -2 & -6 & -1 \\
 1 & -4 & 2
 \end{vmatrix}$$

$$\begin{vmatrix} 29 & 65 & 48 & -27 \\ 45 & 46 & 86 & -69 \\ -75 & -76 & -20 & 59 \\ -18 & -91 & -4 & -19 \end{vmatrix} \begin{pmatrix} 857 & 211 & 87 & 157 & 329 \\ -962 & 801 & -170 & -25 & -898 \\ -159 & 187 & -187 & -89 & 544 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
3 & -6 & -4 & -4 & -9 \\
-6 & -2 & 1 & -5 & 7
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
-47 & 113 \\
-278 & 945
\end{array}\right|$$

$$\begin{pmatrix}
-5 & -5 & 0 \\
-6 & 7 & -1
\end{pmatrix} \qquad \begin{pmatrix}
75 & 23 & -52 & -97 \\
-63 & -9 & -76 & 72
\end{pmatrix}$$

$$\begin{pmatrix} 80 & -97 & 93 & 53 \\ 56 & -61 & 73 & -42 \\ -12 & 86 & 83 & 3 \\ -4 & -92 & 28 & 54 \end{pmatrix} \qquad \begin{pmatrix} 7 & -2 & 8 & 3 \\ 3 & 3 & -6 & -2 \\ -7 & 2 & -5 & 8 \end{pmatrix}$$

$$\begin{vmatrix}
-71 & -4 \\
-66 & 11
\end{vmatrix}
\qquad
\begin{pmatrix}
8 & 2 & -4 & -5 & 1 \\
7 & -2 & -5 & 3 & 7 \\
-2 & 5 & 1 & -8 & -5
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c} 49 & 92 & -3 & -66 \\ 57 & -81 & 63 & -91 \end{array}\right) \left(\begin{array}{ccc|c} 4 & 7 & -1 & 7 & 8 & -9 \\ 9 & -9 & 5 & -4 & -4 & -9 \\ 9 & -7 & 1 & -9 & 7 & -8 \\ -3 & 0 & 3 & 8 & 2 & 2 \end{array}\right)$$

$$\left(\begin{array}{cc|c}
387 & -386 & -664 \\
142 & 83 & 878
\end{array}\right) \qquad \left(\begin{array}{cc|c}
3 & -5 & -2 & 6 \\
1 & 3 & -3 & 3 \\
-6 & -9 & 1 & 1 \\
3 & -6 & 6 & -5
\end{array}\right)$$

$$\begin{pmatrix}
55 & -58 & -63 & | & -4 \\
-33 & -15 & 25 & | & -24 \\
58 & -79 & 28 & | & 87
\end{pmatrix}$$

$$\begin{pmatrix}
7 & 3 & | & -2 \\
-1 & -2 & | & 7
\end{pmatrix}$$

$$\begin{pmatrix} -27 & 58 \\ 34 & 11 \end{pmatrix} \qquad \begin{pmatrix} -62 & -56 & 37 \\ -26 & 17 & -54 \\ -29 & -31 & 6 \end{pmatrix}$$

$$\left| \begin{array}{cc}
9 & 5 \\
0 & 2
\end{array} \right| 
\left( \begin{array}{cc}
-60 & 92 \\
94 & 53
\end{array} \right)$$

$$\left(\begin{array}{cc|c}
-22 & 98 & 34 \\
-72 & 2 & -34
\end{array}\right) \qquad \left(\begin{array}{cc|c}
7 & -7 \\
-5 & -7 \\
2 & 1
\end{array}\right)$$

$$\begin{pmatrix}
2 & 6 & -4 & -1 & 3 & | & -8 \\
-3 & -9 & 8 & 3 & -8 & | & 0 \\
4 & 4 & 5 & 4 & 5 & | & -3 \\
-1 & 8 & 2 & 5 & -6 & | & 3 \\
3 & 2 & 5 & -7 & -4 & | & -2
\end{pmatrix}
\begin{pmatrix}
38 & -40 & 53 & 74 & | & 57 \\
-46 & 78 & 0 & -4 & | & -23
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
35 & -94 & -53 & 78 & 65 \\
-82 & -42 & 68 & 16 & 20
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
-5 & 1 & -3 \\
1 & -4 & -6 \\
0 & -6 & 4
\end{array}\right|$$

$$\begin{pmatrix}
-58 & 8 & -2 & 72 & 56 \\
81 & 21 & -36 & -80 & -65 \\
-76 & -70 & 60 & -33 & 12 \\
96 & 72 & 87 & -60 & 73
\end{pmatrix} \quad \begin{vmatrix}
-714 & -805 \\
64 & 864
\end{vmatrix}$$

$$\left(\begin{array}{cc} -2 & 0 \\ 6 & 8 \end{array}\right) \qquad \left|\begin{array}{ccc} -1 & 1 & 4 \\ -6 & -3 & 0 \\ -5 & -4 & 2 \end{array}\right|$$

$$\left( \begin{array}{ccc|c} -701 & -831 & -222 & 277 & -771 \\ 918 & 502 & -128 & 899 & -574 \end{array} \right) \left( \begin{array}{ccc|c} 3 & -1 & 20 \\ -62 & -2 & 10 \\ -80 & -69 & 40 \end{array} \right)$$

$$\left(\begin{array}{cc|c}
20 & -7 & 92 \\
55 & 68 & -8
\end{array}\right) \qquad \left|\begin{array}{cc|c}
-3 & -4 & -5 \\
-9 & 0 & -2 \\
7 & -4 & 7
\end{array}\right|$$

$$\left(\begin{array}{cc|c}
55 & 57 & 44 \\
27 & -35 & -76
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-8 & -8 \\
1 & 8 \\
1 & -7 \\
-3 & 3
\end{array}\right)$$

$$\begin{vmatrix}
-60 & -79 & 6 \\
-47 & -55 & 89 \\
-70 & -18 & -30
\end{vmatrix}
\begin{vmatrix}
62 & -27 & 92 \\
-33 & 32 & -40 \\
46 & -96 & -56
\end{vmatrix}$$

$$\begin{pmatrix} 49 & 44 & -77 \\ 26 & 92 & -83 \\ 57 & 49 & -87 \\ -34 & -54 & 8 \end{pmatrix} \qquad \begin{pmatrix} 4 & 9 & 0 \\ -4 & 7 & -7 \end{pmatrix}$$

$$\begin{pmatrix}
-46 & 974 & -396 & | & 140 \\
166 & -463 & -984 & | & 715 \\
-612 & 329 & 525 & | & 454
\end{pmatrix}$$

$$\begin{pmatrix}
-63 & -47 \\
-4 & -38
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-9 & -3 & 5 & 4 & 6 & -3 \\
1 & 7 & -6 & 9 & -8 & 7
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-3 & 0 \\
-8 & 4 \\
7 & 5
\end{array}\right)$$

$$\begin{pmatrix}
-4 & 27 & 41 & 43 & -16 & | & -7 \\
97 & -18 & 21 & -1 & 70 & | & -68 \\
2 & 72 & -49 & 84 & 90 & | & 29
\end{pmatrix}
\begin{pmatrix}
-66 & -8 & 52 & | & 20 \\
-87 & -17 & 39 & | & 55 \\
64 & -54 & 0 & | & 98
\end{pmatrix}$$

$$\left(\begin{array}{cc|cc|c} -99 & 75 & -8 & -2 & 28 \\ 37 & 26 & 39 & 76 & -70 \end{array}\right) \qquad \left(\begin{array}{cc|c} 36 & 81 & -6 \\ 25 & 64 & 85 \end{array}\right)$$

$$\begin{vmatrix} 7 & 9 & 2 & -3 \\ 1 & -3 & -8 & -7 \\ -8 & 9 & 8 & 3 \\ 9 & 2 & 8 & -3 \end{vmatrix} \begin{pmatrix} 21 & 86 & -38 & -41 & -51 \\ -59 & -32 & -54 & 57 & -75 \end{pmatrix}$$

$$\left(\begin{array}{ccccc} -359 & 276 & 526 & 964 & -950 \\ -126 & -319 & 847 & 98 & -98 \end{array}\right) \left|\begin{array}{cccccc} 0 & -5 & -7 & -5 \\ 3 & -4 & 8 & 1 \\ 5 & -1 & 3 & 8 \\ -3 & -5 & -8 & 9 \end{array}\right|$$

$$\begin{vmatrix}
-4 & -5 & 0 \\
-4 & 6 & -3 \\
-7 & 4 & -5
\end{vmatrix} \qquad \begin{vmatrix}
7 & 13 & -87 & -42 \\
17 & 8 & 67 & 0 \\
70 & 93 & -80 & -84 \\
-89 & -95 & -95 & 64
\end{vmatrix}$$

$$\begin{vmatrix} 60 & -7 & 92 & 97 \\ 87 & -73 & 7 & 36 \\ -36 & 53 & 90 & 93 \\ -7 & -39 & 53 & -70 \end{vmatrix} \begin{pmatrix} 28 & -57 & 61 & -16 & 88 \\ 73 & 13 & -7 & 75 & 2 \\ -69 & -28 & 66 & -55 & 74 \end{pmatrix}$$

$$\begin{vmatrix}
9 & -2 & 5 \\
-8 & 1 & -6 \\
-2 & 0 & -6
\end{vmatrix}$$

$$\begin{vmatrix}
-33 & 28 & -57 & -95 \\
-2 & -54 & -22 & 42 \\
65 & -29 & 72 & 14 \\
-24 & 18 & 40 & 26
\end{vmatrix}$$

$$\left(\begin{array}{ccc}
-6 & -8 & -6 \\
2 & 5 & 9
\end{array}\right) \qquad \left(\begin{array}{ccc}
795 & 227 \\
188 & -935
\end{array}\right)$$

$$\begin{pmatrix} 235 & 276 & -508 & -466 & 190 & 679 \\ 854 & 314 & -714 & -748 & -79 & 198 \\ -476 & 203 & -874 & 927 & 580 & -332 \\ 605 & -831 & -563 & -734 & 927 & -148 \\ 536 & -464 & -992 & 788 & -652 & -555 \end{pmatrix} \begin{vmatrix} 48 & -39 & -6 \\ -47 & -58 & -79 \\ 41 & 1 & -83 \end{vmatrix}$$

$$\begin{pmatrix} -43 & 248 & 708 \\ -52 & 64 & -195 \\ -846 & -762 & 211 \\ 274 & -152 & 865 \end{pmatrix} \qquad \begin{vmatrix} -1 & -2 & 2 \\ 8 & 8 & -1 \\ -9 & 8 & 5 \end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
-1 & 0 & 0 & -2 & -2 \\
6 & -1 & 8 & -6 & 8
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
9 & -5 & 7 & 9 \\
-7 & 8 & 1 & 5
\end{array}\right)$$

$$\begin{pmatrix} -4 & -8 \\ -9 & 9 \\ -1 & 2 \\ 8 & -3 \\ 6 & 0 \end{pmatrix} \qquad \begin{pmatrix} -579 & 482 & -200 & | & -95 \\ 254 & -967 & 476 & | & -865 \end{pmatrix}$$

$$\begin{pmatrix}
-67 & 68 \\
-12 & -98
\end{pmatrix}$$

$$\begin{vmatrix}
89 & 51 & 26 & -65 \\
58 & -91 & -11 & -76 \\
-85 & 95 & -18 & 35 \\
24 & 54 & -60 & -48
\end{vmatrix}$$

$$\begin{pmatrix} -3 & 6 & -2 & -3 & 6 \\ -4 & -4 & -5 & -5 & 4 \\ 3 & -3 & -2 & 2 & 4 \\ -9 & -7 & 8 & 3 & 5 \end{pmatrix} \begin{pmatrix} -37 & 54 & 43 & 38 & -30 & 45 \\ 79 & 0 & 77 & 3 & 56 & -2 \\ 10 & -36 & -80 & 55 & 41 & -5 \end{pmatrix}$$

$$\begin{pmatrix} 3 & 1 & 2 & 7 & | & -5 \\ 9 & 1 & 0 & 7 & | & -5 \\ 0 & -4 & -9 & 7 & | & 6 \\ 7 & 1 & -3 & -5 & | & -2 \end{pmatrix} \quad \begin{pmatrix} 36 & 66 & -10 & | & 93 \\ -48 & 56 & -81 & | & 4 \end{pmatrix}$$

$$\begin{vmatrix} 52 & 3 & -58 & -85 \\ 69 & 50 & 7 & -20 \\ 10 & 60 & -91 & -50 \\ -51 & 56 & -45 & 88 \end{vmatrix} \begin{vmatrix} 6 & -3 & 4 & -4 & -7 & 5 \\ -4 & 3 & -9 & -7 & 8 & -1 \\ -1 & 2 & 1 & -8 & -6 & -3 \\ 4 & 9 & -5 & -1 & 4 & 2 \\ 3 & -2 & 8 & -4 & 8 & 7 \end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
1 & 8 & -3 \\
-9 & -1 & 2
\end{array}\right) \qquad \left(\begin{array}{cccc|c}
4 & -3 & -8 & 9 & 6 \\
-1 & 6 & 5 & -5 & 7 \\
3 & 2 & -7 & 0 & 0 \\
-7 & -5 & -6 & 4 & 8
\end{array}\right)$$

$$\begin{pmatrix}
-7 & 5 & 7 & | & -3 \\
2 & 7 & -4 & | & -3 \\
-8 & -5 & -7 & | & -8
\end{pmatrix} \qquad \qquad \begin{pmatrix}
-7 & -5 & 0 & | & -6 \\
1 & 8 & 3 & | & 5
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
-97 & -43 & 92 & -5 \\
86 & -63 & 62 & 62
\end{array}\right)
\left(\begin{array}{ccc|c}
7 & 7 & -6 & -1 & 9 \\
-1 & 8 & 8 & -6 & -6 \\
-9 & -2 & 1 & 3 & 6
\end{array}\right)$$

$$\left(\begin{array}{ccc|c}
-8 & -5 & 0 & 6 & 2 \\
4 & -5 & -6 & -9 & 4 \\
-2 & -4 & -6 & 8 & -1
\end{array}\right)
\left(\begin{array}{ccc|c}
-9 & 5 & 9 & 5 & 7 \\
-3 & 3 & 7 & 5 & 4 \\
-8 & 4 & 8 & -7 & -5
\end{array}\right)$$

$$\begin{vmatrix} 70 & -8 & -5 & -55 \\ 33 & -86 & 80 & 61 \\ -42 & -58 & 41 & -22 \\ 87 & -65 & 52 & 88 \end{vmatrix} \begin{pmatrix} -6 & -7 & 4 & 1 & -5 \\ 4 & -3 & -4 & -5 & 2 \end{pmatrix}$$

$$\left(\begin{array}{cc|c}
8 & -4 & 7 \\
2 & -8 & 2
\end{array}\right) \qquad \left(\begin{array}{cc|c}
6 & -4 \\
-8 & -3 \\
-9 & 8
\end{array}\right)$$

$$\begin{pmatrix} -3 & -4 & -5 \\ 6 & 5 & 8 \\ -8 & -2 & 5 \end{pmatrix} \begin{pmatrix} -18 & -28 & -98 & 35 & -1 & 73 \\ -56 & 21 & 19 & 60 & 70 & -42 \\ 81 & 77 & -60 & 86 & 65 & -50 \\ 73 & -1 & -40 & -31 & 38 & 38 \end{pmatrix}$$

$$\begin{pmatrix}
-2 & -1 & -7 \\
1 & 6 & -6 \\
-2 & 3 & 9 \\
-2 & 9 & 7
\end{pmatrix}$$

$$\begin{pmatrix}
1 & 6 & 5 \\
-7 & 3 & -9
\end{pmatrix}$$

$$\begin{pmatrix} -54 & -2 & 27 & -93 & -62 & | & -13 \\ 87 & -46 & -30 & -65 & 10 & | & -12 \\ -50 & 66 & 53 & 98 & -82 & | & 13 \end{pmatrix} \begin{vmatrix} -463 & -968 & -633 \\ -505 & 280 & 319 \\ 187 & -806 & -896 \end{vmatrix}$$

$$\begin{pmatrix}
-9 & -3 & 4 & 9 \\
-6 & 9 & -2 & 2
\end{pmatrix} 
\begin{pmatrix}
3 & 3 & 5 & -7 & -2 \\
-6 & -9 & 1 & -3 & -7 \\
7 & 7 & 5 & 7 & -6 \\
1 & -7 & 0 & 5 & -7 \\
-4 & -6 & -6 & -4 & -5
\end{pmatrix}$$

$$\begin{vmatrix}
-97 & 71 & 47 \\
-98 & -73 & -57 \\
0 & -13 & 23
\end{vmatrix}$$

$$\begin{vmatrix}
-84 & 58 \\
97 & -63
\end{vmatrix}$$

$$\begin{pmatrix} 20 & 2 & -28 & 11 & -56 \\ 48 & -32 & 13 & 78 & -38 \\ 28 & 38 & 53 & -99 & 56 \end{pmatrix} \qquad \begin{pmatrix} -89 & 68 \\ -24 & -62 \\ -98 & 27 \end{pmatrix}$$

$$\begin{pmatrix} 33 & -18 & 4 & 65 \ 96 & -45 & 77 & -29 \ -21 & 88 & 25 & -75 \end{pmatrix} \begin{pmatrix} -69 & 1 & -72 & -1 & -82 & 12 \ 97 & 45 & -79 & 11 & 36 & -46 \end{pmatrix}$$

$$\begin{pmatrix} -31 & 40 \\ 63 & -58 \\ 50 & -43 \\ 20 & -19 \end{pmatrix} \qquad \begin{pmatrix} 254 & -942 & -565 \\ -583 & -573 & -748 \end{pmatrix}$$

$$\begin{pmatrix} -65 & 58 \\ -42 & 79 \end{pmatrix} \qquad \begin{pmatrix} -190 & -35 & 307 \\ -573 & -752 & -254 \end{pmatrix}$$

$$\begin{pmatrix}
9 & 3 \\
-1 & 3 \\
-6 & 3
\end{pmatrix} \qquad \qquad \begin{pmatrix}
0 & 0 & 8 \\
-7 & -5 & 9
\end{pmatrix}$$

$$\begin{pmatrix}
-8 & 8 & 0 & -9 & -3 & | & -5 \\
-6 & -1 & 3 & -3 & 8 & | & -8 \\
-2 & -8 & -5 & 2 & 6 & | & 5
\end{pmatrix}
\begin{pmatrix}
12 & 37 & | & 33 \\
-66 & 57 & | & -87
\end{pmatrix}$$

$$\begin{vmatrix}
5 & -1 & 2 & 5 \\
-6 & 5 & 3 & -5 \\
2 & -6 & -5 & 9 \\
-2 & -8 & 7 & 5
\end{vmatrix}$$

$$\begin{pmatrix}
97 & -7 & 89 \\
82 & 96 & 48
\end{pmatrix}$$

$$\begin{vmatrix}
8 & 5 & 7 & 2 \\
-7 & -1 & -3 & -3 \\
7 & 6 & -8 & 2 \\
6 & -4 & -6 & -7
\end{vmatrix}$$

$$\begin{pmatrix}
4 & -1 & 0 & -7 & 6 & | & -6 \\
2 & -2 & -4 & 3 & 6 & | & 3
\end{pmatrix}$$

$$\begin{pmatrix} -943 & 279 & 845 & -625 & -165 & 929 \\ 99 & -403 & -827 & 372 & 819 & 407 \\ 745 & -690 & -369 & -469 & 283 & -212 \\ 728 & -400 & 667 & 311 & -245 & -822 \\ -746 & 668 & -832 & 938 & -332 & -882 \end{pmatrix} \begin{vmatrix} -8 & -8 & -4 & 9 \\ 7 & 4 & -9 & 3 \\ -7 & -6 & -9 & 9 \\ -4 & -7 & 2 & 8 \end{vmatrix}$$

$$\left(\begin{array}{cc|c}
0 & 0 & -4 \\
7 & 8 & 1
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-6 & 7 \\
-8 & 0 \\
-8 & -2 \\
-5 & 2
\end{array}\right)$$

$$\begin{pmatrix}
1 & -7 & 8 & -5 & | & 1 \\
-3 & 5 & -2 & 2 & | & -5 \\
7 & 7 & 5 & -4 & | & 8
\end{pmatrix}$$

$$\begin{vmatrix} -3 & 7 \\ 3 & -5 \end{vmatrix} \qquad \begin{pmatrix} 9 & 8 & -3 \\ -6 & -3 & -1 \\ 0 & 0 & -3 \\ -6 & 4 & 0 \\ -1 & 0 & 9 \end{pmatrix}$$

$$\left| \begin{array}{cc|c} 0 & -8 \\ 6 & -9 \end{array} \right| \qquad \left( \begin{array}{cc|c} -9 & 3 & 0 \\ -7 & -9 & -9 \end{array} \right)$$

$$\begin{bmatrix} 22 & 82 & -52 & -26 \\ -90 & -11 & 1 & 16 \\ 80 & -42 & -56 & 29 \\ 80 & -43 & -43 & -49 \end{bmatrix} \qquad \begin{bmatrix} 0 & 0 & 2 \\ -5 & -4 & -1 \\ 1 & -6 & -9 \end{bmatrix}$$

$$\begin{vmatrix}
12 & -26 & -87 & 71 \\
-31 & -84 & 78 & -52 \\
-41 & 99 & 39 & 53 \\
-74 & -76 & -20 & 16
\end{vmatrix}$$

$$\begin{pmatrix}
-3 & 7 \\
7 & 2 \\
-5 & -8 \\
9 & -8 \\
9 & 6
\end{pmatrix}$$

$$\begin{vmatrix} 91 & 66 & -90 \\ 75 & -8 & 1 \\ -96 & 47 & 78 \end{vmatrix} \begin{vmatrix} 25 & 76 & -55 & -96 \\ 46 & -27 & 62 & 4 & -19 \\ -6 & -68 & 96 & -50 \\ -42 & 64 & 5 & 50 & -93 \end{vmatrix}$$

$$\begin{pmatrix} 29 & -83 \\ -70 & -6 \\ 62 & -76 \\ 40 & 47 \\ -25 & -20 \end{pmatrix} \qquad \begin{vmatrix} 4 & -7 & -5 & 6 \\ -9 & 8 & 4 & -3 \\ 7 & 4 & 8 & -2 \\ -8 & 7 & -7 & 2 \end{vmatrix}$$

$$\begin{vmatrix}
-62 & -87 & -34 \\
52 & -37 & -90 \\
-41 & 89 & -82
\end{vmatrix}$$

$$\begin{pmatrix}
-61 & 51 \\
13 & -31
\end{pmatrix}$$

$$\left(\begin{array}{ccc}
8 & -1 & -5 \\
9 & 6 & -4
\end{array}\right) \qquad \left(\begin{array}{ccc}
-9 & -8 & 7 \\
6 & 9 & -9
\end{array}\right)$$

$$\begin{pmatrix}
1 & -6 & -8 & -8 \\
-7 & -3 & -1 & -9 \\
-7 & 4 & -1 & -6 \\
-9 & 0 & 5 & 9
\end{pmatrix}$$

$$\begin{vmatrix}
2 & -93 & 1 \\
34 & -65 & -47 \\
89 & 0 & -82
\end{vmatrix}$$

$$\begin{vmatrix}
89 & 96 & -92 \\
31 & -44 & -99 \\
61 & 44 & -53
\end{vmatrix}$$

$$\begin{pmatrix}
12 & 66 & 66 & 4 & 90 \\
-29 & 99 & -64 & 33 & -20 \\
-6 & 3 & -63 & -14 & -15
\end{pmatrix}$$

$$\left( \begin{array}{cccc} 9 & 8 & 0 \\ -1 & -7 & -7 \end{array} \right) \left( \begin{array}{ccccc} -981 & -652 & 509 & -810 & 489 & 284 \\ -741 & 610 & 865 & -235 & 772 & 478 \end{array} \right)$$

$$\left(\begin{array}{ccc|c}
63 & 52 & 29 & -64 & 93 \\
26 & 94 & 60 & 31 & -1
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
-73 & -50 & \\
93 & 57
\end{array}\right|$$

$$\begin{vmatrix}
-93 & 29 & -12 \\
16 & 25 & 66 \\
89 & -39 & 88
\end{vmatrix}$$

$$\begin{pmatrix}
-8 & 8 & 8 & | -8 \\
7 & 3 & 6 & | 8 \\
-9 & -8 & 2 & | 7
\end{pmatrix}$$

$$\begin{pmatrix}
25 & -5 & 22 & -8 & | & -73 \\
-90 & -43 & 16 & 91 & 2 \\
45 & -99 & -92 & -41 & | & -94 \\
-54 & -65 & -4 & 91 & | & -38
\end{pmatrix}
\begin{vmatrix}
576 & 365 & -259 & 929 \\
801 & -533 & 338 & 420 \\
667 & -923 & -183 & -777 \\
-491 & 704 & -92 & 183
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
-59 & -3 & -60 & 79 & 18 \\
-26 & 28 & -63 & 43 & 20
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
2 & 1 & -3 & -1 \\
0 & 0 & 2 & -5
\end{array}\right)$$

$$\begin{pmatrix} -2 & -41 \\ 70 & 65 \\ -8 & 93 \end{pmatrix} \qquad \begin{pmatrix} 8 & 2 \\ -7 & -7 \\ 1 & 5 \end{pmatrix}$$

$$\begin{pmatrix} -426 & 293 & -827 & -982 & -8 \\ 975 & 658 & -731 & -673 & -809 \\ 872 & -729 & 799 & -260 & -540 \end{pmatrix} \begin{pmatrix} 36 & -93 \\ 59 & -78 \\ -87 & -64 \end{pmatrix}$$

$$\begin{vmatrix}
 -1 & -25 \\
 1 & -46
 \end{vmatrix}
 =
 \begin{pmatrix}
 2 & -61 & 69 & 15 & 47 & | & -11 \\
 -27 & 45 & 67 & 70 & -78 & | & 68
 \end{pmatrix}$$

$$\begin{pmatrix}
12 & 44 \\
73 & 96
\end{pmatrix}
\qquad
\begin{pmatrix}
-3 & 1 & -2 \\
0 & -9 & 4 \\
-6 & 4 & -4 \\
-5 & 4 & -7
\end{pmatrix}$$

$$\left(\begin{array}{cc|cc|c}
8 & -3 & 5 & 6 \\
2 & -2 & 2 & -3 \\
8 & -7 & 8 & 0
\end{array}\right) \qquad \left|\begin{array}{cc|cc|c}
589 & 179 & 340 \\
955 & 390 & -738 \\
-877 & 765 & -174
\end{array}\right|$$

$$\begin{pmatrix}
915 & 158 \\
608 & 857
\end{pmatrix}
\qquad
\begin{pmatrix}
-9 & -6 & 4 & 3 & 0 & | & -5 \\
-2 & -6 & 0 & -7 & 8 & | & 3
\end{pmatrix}$$

$$\begin{pmatrix}
-50 & -91 & | & 78 \\
37 & 90 & | & 24
\end{pmatrix}$$

$$\begin{vmatrix}
-66 & -234 & 558 & -865 \\
-70 & 840 & -684 & 934 \\
-783 & 345 & 988 & 931 \\
-166 & 579 & 259 & 16
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
-2 & 3 & -8 & -2 & 4 \\
6 & -3 & -8 & 2 & -7
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-82 & 31 \\
-37 & -17 \\
71 & 75
\end{array}\right)$$

$$\left(\begin{array}{ccc|c}
-69 & -64 & -10 & 56 \\
71 & -29 & -42 & 51 \\
32 & -94 & -66 & -98
\end{array}\right)
\left(\begin{array}{ccc|c}
-85 & -18 & 15 & -62 \\
59 & -71 & 62 & 60 \\
-28 & 83 & -98 & 28 \\
-72 & 10 & 72 & -35
\end{array}\right)$$

$$\begin{vmatrix}
99 & 67 & 47 & -74 \\
-87 & -44 & 58 & 50 \\
3 & -51 & -29 & 91 \\
86 & 37 & -82 & -39
\end{vmatrix}$$

$$\begin{vmatrix}
0 & -5 & -7 \\
8 & 6 & -6 \\
2 & -6 & 6
\end{vmatrix}$$

$$\left|\begin{array}{ccc} 444 & -359 \\ 50 & -864 \end{array}\right| \qquad \left(\begin{array}{cccc} -34 & -660 & -103 \\ -801 & -657 & -876 \end{array}\right)$$

$$\begin{pmatrix}
8 & -6 & -6 & 1 & -5 & | & -6 \\
3 & -5 & -9 & -6 & -9 & | & -3 \\
9 & 8 & -7 & -9 & 6 & | & 4 \\
7 & 4 & 4 & 7 & -1 & | & 6
\end{pmatrix}$$

$$\begin{pmatrix} 82 & -28 & 47 \\ -50 & 12 & 29 \\ -50 & -66 & 28 \end{pmatrix} \qquad \begin{pmatrix} -9 & 3 \\ 3 & 8 \\ 2 & -2 \\ -4 & -9 \end{pmatrix}$$

$$\begin{vmatrix} -1 & -8 \\ -5 & 4 \end{vmatrix} \qquad \qquad \begin{pmatrix} -33 & 18 & | & -76 \\ 27 & 13 & | & -72 \end{pmatrix}$$

$$\left|\begin{array}{cc}2 & -3\\0 & 7\end{array}\right| \qquad \left|\begin{array}{cc}5 & -7\\4 & -1\end{array}\right|$$

$$\begin{pmatrix} -2 & 5 \\ -7 & 8 \\ 4 & -1 \\ -5 & -6 \end{pmatrix} \qquad \begin{vmatrix} -78 & -27 \\ -56 & 57 \end{vmatrix}$$

$$\begin{pmatrix} -8 & 1 \\ 1 & -5 \\ -3 & -4 \\ -1 & 2 \end{pmatrix} \qquad \begin{pmatrix} -46 & -66 & 54 \\ -58 & -2 & -1 \\ 16 & -74 & -13 \\ 60 & -45 & 73 \\ -35 & -71 & 60 \end{pmatrix}$$

$$\begin{pmatrix} -776 & -838 \\ 795 & 415 \\ 558 & 547 \end{pmatrix} \qquad \begin{pmatrix} -6 & 7 \\ 6 & 0 \\ 6 & 9 \end{pmatrix}$$

$$\begin{pmatrix}
40 & -28 & 64 & | & -99 \\
-78 & 41 & 86 & 0 \\
34 & 16 & 93 & | & -39
\end{pmatrix}
\begin{vmatrix}
-63 & -81 & -72 & 27 \\
-78 & 82 & -93 & -46 \\
65 & 68 & -95 & 78 \\
-82 & -78 & -85 & -47
\end{vmatrix}$$

$$\begin{pmatrix}
-83 & -61 & -31 & -61 & 32 \\
93 & 40 & 64 & -89 & -95 \\
84 & -86 & 68 & 58 & -15
\end{pmatrix}
\begin{pmatrix}
-3 & -3 & -8 & 6 & -5 \\
4 & 4 & 3 & 4 & -3
\end{pmatrix}$$

$$\begin{vmatrix}
26 & -261 & -648 \\
-461 & 146 & 116 \\
291 & 302 & 395
\end{vmatrix}$$

$$\begin{pmatrix}
68 & 92 & -94 & 50 & -42 \\
97 & 17 & 56 & 37 & -96
\end{pmatrix}$$

$$\begin{pmatrix}
-2 & 51 \\
11 & -5 \\
-40 & -25
\end{pmatrix}$$

$$\begin{vmatrix}
75 & -9 & 93 \\
75 & 7 & -11 \\
14 & -93 & 11
\end{vmatrix}$$

$$\begin{vmatrix}
-45 & 29 \\
-86 & -75
\end{vmatrix}
\qquad
\begin{pmatrix}
9 & -9 & -3 & 4 & 2 \\
7 & 2 & 2 & -8 & 8
\end{pmatrix}$$

$$\begin{pmatrix} -731 & -661 & 51 & -283 & 379 \\ -76 & 295 & -712 & 872 & 37 \\ 738 & 286 & 619 & -438 & 755 \\ 923 & -773 & 808 & 477 & 220 \end{pmatrix} \begin{pmatrix} -490 & -569 \\ -974 & -113 \\ -720 & 898 \end{pmatrix}$$

$$\begin{pmatrix}
7 & -4 \\
-8 & -3
\end{pmatrix}$$

$$\begin{vmatrix}
-63 & -50 & -68 & -82 \\
-4 & -27 & 39 & -82 \\
60 & -49 & -56 & 43 \\
69 & 81 & 26 & 70
\end{vmatrix}$$

$$\begin{pmatrix} -69 & 66 \\ 73 & -24 \\ 15 & -87 \end{pmatrix} \qquad \begin{pmatrix} 94 & 59 & -20 & -63 \\ -59 & 39 & 37 & -4 \end{pmatrix}$$

$$\begin{vmatrix} 4 & -1 \\ -9 & 5 \end{vmatrix} \qquad \begin{pmatrix} -6 & -8 & 2 & 7 & -6 & -6 \\ -8 & -2 & -2 & -3 & 4 & 6 \\ 6 & -1 & -7 & 2 & -4 & 7 \\ 8 & -4 & -7 & -9 & 6 & 7 \\ 4 & 3 & -4 & 6 & 7 & 7 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
7 & -9 & -9 \\
-1 & 2 & 3
\end{array}\right) \qquad \left(\begin{array}{cccc|c}
2 & -5 & -5 & -6 & 5 \\
-4 & -8 & 0 & -5 & 6 \\
0 & -9 & -3 & 4 & -1 \\
0 & 7 & 0 & 9 & -7
\end{array}\right)$$

$$\begin{pmatrix} -12 & -74 \\ -22 & -1 \\ -65 & -98 \\ -7 & 76 \end{pmatrix} \qquad \begin{pmatrix} 48 & 27 & 42 \\ 31 & 0 & 70 \\ -37 & 95 & 63 \\ 6 & 82 & 84 \\ -70 & -45 & 14 \end{pmatrix}$$

$$\begin{vmatrix}
5 & 8 \\
-8 & -8
\end{vmatrix}$$

$$\begin{vmatrix}
-13 & 41 & 63 \\
-52 & -23 & -91 \\
-75 & 94 & 84
\end{vmatrix}$$

$$\begin{pmatrix}
1 & -3 & 3 & 6 \\
-8 & -3 & -8 & 7 \\
-1 & 6 & 0 & 4
\end{pmatrix}$$

$$\begin{pmatrix}
-2 & 5 \\
6 & -6 \\
9 & 2 \\
0 & 4
\end{pmatrix}$$

$$\begin{pmatrix} -69 & 84 \\ 84 & 66 \end{pmatrix}$$
  $\begin{pmatrix} -18 & -31 \\ -65 & -91 \end{pmatrix}$ 

$$\left(\begin{array}{ccc|ccc|c}
5 & -9 & 0 & -5 & -4 \\
2 & -7 & 1 & 4 & 7 \\
9 & 7 & 3 & 3 & -8
\end{array}\right) \quad \left(\begin{array}{cccc|c}
-7 & 1 & 5 & 4 \\
-5 & -4 & -7 & -9 \\
-1 & 8 & 4 & 3
\end{array}\right)$$

$$\begin{vmatrix}
-2 & 9 \\
-7 & -6
\end{vmatrix}$$

$$\begin{pmatrix}
34 & 44 & -5 & 90 & | -4 \\
14 & -34 & 57 & -50 & | 49 \\
-32 & 45 & -85 & -64 & | -8 \\
53 & 82 & -80 & 49 & | 38
\end{pmatrix}$$

$$\begin{pmatrix}
9 & 4 & -2 \\
-6 & 7 & -7
\end{pmatrix}
\qquad
\begin{pmatrix}
2 & -6 & -7 & -2 & 8 & | -8 \\
8 & -9 & 8 & 8 & 9 & | -4 \\
1 & -9 & -9 & 3 & -2 & | -4 \\
3 & 4 & -7 & -9 & -9 & | 8 \\
9 & -9 & 0 & -8 & -1 & | -9
\end{pmatrix}$$

$$\begin{vmatrix}
-38 & 39 & 51 \\
-7 & 74 & 73 \\
-16 & -74 & 67
\end{vmatrix}$$

$$\begin{pmatrix}
4 & 5 & 9 & -9 & | & -2 \\
7 & -8 & 8 & 0 & | & -4 \\
-7 & 5 & 2 & -3 & | & 5
\end{pmatrix}$$

$$\begin{vmatrix} 7 & -5 & 8 \\ -2 & -6 & -7 \\ -7 & -1 & 0 \end{vmatrix} \begin{pmatrix} -21 & 36 & 37 & 22 & 55 & -7 \\ -21 & 60 & -72 & 55 & -37 & -51 \\ -58 & -62 & 56 & -82 & -51 & 99 \\ -45 & -9 & 14 & 89 & -35 & -22 \\ 61 & 99 & 82 & -52 & 54 & 83 \end{pmatrix}$$

$$\begin{pmatrix}
-869 & -668 & 927 \\
723 & -259 & 169
\end{pmatrix}
\begin{vmatrix}
263 & 234 & 637 & -672 \\
909 & -594 & -846 & -613 \\
908 & 570 & -427 & 257 \\
207 & 248 & -816 & -256
\end{vmatrix}$$

$$\begin{pmatrix}
-4 & 1 & -3 & -6 \\
9 & 9 & 6 & 0 \\
-5 & -5 & -6 & -6 \\
0 & -8 & -5 & 8 \\
2 & 0 & 3 & 6
\end{pmatrix}$$

$$\begin{vmatrix}
9 & 7 & -9 & -5 \\
6 & 5 & -5 & 0 \\
-1 & 7 & 8 & 4 \\
6 & 0 & 7 & 7
\end{vmatrix}$$

$$\begin{pmatrix}
-7 & 3 \\
1 & -3
\end{pmatrix}
\begin{vmatrix}
382 & 191 & -874 & -164 \\
-229 & 28 & 251 & 419 \\
-40 & 902 & 361 & 791 \\
-877 & 94 & -934 & -350
\end{vmatrix}$$

$$\begin{vmatrix}
76 & -54 & 30 \\
65 & 18 & 19 \\
76 & 14 & 90
\end{vmatrix}$$

$$\begin{pmatrix}
0 & -3 & -6 \\
-1 & -7 & 6 \\
7 & -5 & -7
\end{pmatrix}$$

$$\left| \begin{array}{ccc}
-1 & 7 \\
6 & 5
\end{array} \right| \qquad \left( \begin{array}{cccc}
5 & -8 & 3 \\
-5 & 0 & -6 \\
0 & -9 & 5
\end{array} \right)$$

$$\begin{pmatrix}
-32 & 24 & 85 \\
-30 & -25 & 62
\end{pmatrix}
\qquad
\begin{pmatrix}
-85 & -35 \\
24 & -2
\end{pmatrix}$$

$$\begin{pmatrix} -44 & 51 \\ -31 & 19 \\ -54 & -12 \\ 17 & -75 \end{pmatrix} \quad \begin{pmatrix} -26 & 74 & 80 & -74 & 63 \\ 98 & -31 & 96 & -85 & -69 \\ -36 & 92 & -79 & -94 & 20 \end{pmatrix}$$

$$\begin{pmatrix}
5 & 0 & 8 & -6 & 9 \\
-4 & 6 & 4 & 6 & -3
\end{pmatrix}$$

$$\begin{vmatrix}
-42 & -24 & 65 & -20 \\
97 & 23 & 27 & -47 \\
-83 & -1 & 35 & 38 \\
45 & -66 & -91 & -19
\end{vmatrix}$$

$$\begin{vmatrix}
6 & -9 \\
-4 & 7
\end{vmatrix}$$

$$\begin{vmatrix}
-59 & 62 & -2 & 82 \\
-86 & 76 & 28 & -11 \\
-90 & -4 & 78 & 32 \\
20 & -11 & -11 & 9
\end{vmatrix}$$

$$\left(\begin{array}{cc|c}
2 & -8 & 26 \\
-30 & -68 & 48
\end{array}\right) \qquad \left(\begin{array}{cc|c}
5 & 5 & 1 & 8 \\
-4 & -1 & 3 & 0
\end{array}\right)$$

$$\begin{pmatrix}
-63 & -33 & 29 & -47 \\
-40 & 41 & 51 & 30 \\
-73 & 67 & -32 & 81
\end{pmatrix}$$

$$\begin{vmatrix}
78 & 7 \\
-60 & 78
\end{vmatrix}$$

$$\begin{vmatrix}
-809 & 340 \\
637 & -659
\end{vmatrix}
\qquad
\begin{pmatrix}
10 & -24 & -69 \\
-56 & -31 & -33 \\
-57 & 91 & -72
\end{pmatrix}$$

$$\begin{vmatrix} -8 & -98 & 30 & 54 \\ 78 & -64 & -61 & -84 \\ -73 & 40 & 54 & -18 \\ -45 & 55 & -54 & -8 \end{vmatrix} \begin{pmatrix} -32 & -52 & -77 & 26 & | & -49 \\ 40 & 81 & 16 & 78 & | & 61 \\ 51 & 82 & -88 & -48 & | & 28 \\ -34 & 15 & 46 & -7 & | & -19 \end{pmatrix}$$

$$\begin{pmatrix}
3 & -9 \\
-3 & 7 \\
7 & 5 \\
-4 & -5
\end{pmatrix}$$

$$\begin{vmatrix}
-2 & -4 \\
-1 & 1
\end{vmatrix}$$

$$\begin{vmatrix} 6 & -9 \\ -8 & -9 \end{vmatrix} \qquad \begin{pmatrix} -49 & -60 & 92 & -31 & 51 \\ -21 & 99 & 48 & 77 & 14 \\ 4 & -81 & -38 & 80 & 9 \\ 48 & 31 & 0 & -52 & 38 \end{pmatrix}$$

$$\begin{pmatrix}
7 & -8 & -6 \\
1 & -3 & 5 \\
5 & 3 & 8 \\
-7 & -6 & 2
\end{pmatrix}
\qquad
\begin{pmatrix}
0 & -6 & 7 & 8 & -1 \\
3 & 8 & 9 & 3 & 1 \\
2 & 1 & -2 & 0 & 3 \\
7 & 7 & 6 & 1 & 0
\end{pmatrix}$$

$$\begin{vmatrix}
 22 & -37 \\
 12 & -40
 \end{vmatrix}
 \begin{vmatrix}
 36 & -64 \\
 34 & -30
 \end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
5 & -2 & -8 & -7 \\
-3 & 8 & -9 & -5
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-2 & -2 & 6 & 6 \\
-6 & 2 & 7 & -4
\end{array}\right)$$

$$\left(\begin{array}{cc|c} 8 & -4 & -9 \\ -4 & 8 & 6 \end{array}\right) \qquad \left(\begin{array}{cc|c} -5 & -65 & -77 & -93 \\ 75 & 16 & -61 & 2 \end{array}\right)$$

$$\begin{vmatrix}
 6 & 8 \\
 7 & 1
 \end{vmatrix}
 \begin{vmatrix}
 0 & 6 & -9 & 5 \\
 9 & -7 & -5 & -5 \\
 -6 & 0 & 7 & 4 \\
 1 & 0 & 2 & -8
 \end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
41 & 18 & 74 & 28 \\
-9 & -88 & -38 & 80
\end{array}\right) \qquad \left|\begin{array}{ccc|c}
25 & 87 & 82 \\
24 & -79 & -1 \\
-12 & 66 & 70
\end{array}\right|$$

$$\begin{vmatrix}
 -1 & 4 \\
 -5 & -5
 \end{vmatrix}
 \begin{vmatrix}
 -45 & -38 \\
 -38 & 82
 \end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
40 & -48 & -50 \\
-25 & -83 & 45
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
2 & 7 & 0 \\
7 & -9 & -5
\end{array}\right)$$

$$\begin{vmatrix}
-30 & -56 \\
-18 & -36
\end{vmatrix} \qquad \begin{pmatrix}
90 & 45 & 94 & -13 \\
-33 & -15 & 75 & 91 \\
-70 & 93 & 38 & 96
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c} 39 & -62 & -99 \\ 69 & -81 & -81 \end{array}\right) \quad \left(\begin{array}{ccc|c} -44 & -32 & 20 & -72 & -89 \\ -19 & 36 & 96 & -33 & -18 \\ 87 & -1 & 1 & -51 & 31 \end{array}\right)$$

$$\begin{pmatrix} 33 & 66 & -97 & 17 & 79 \\ 28 & -94 & 72 & -47 & -34 \\ 85 & 74 & -11 & 58 & -74 \\ -44 & 77 & -34 & 66 & -71 \end{pmatrix} \begin{vmatrix} 51 & 733 & -244 \\ -121 & -198 & 303 \\ 161 & 913 & -414 \end{vmatrix}$$

$$\begin{pmatrix}
9 & 4 & -3 & -6 & 1 & | & -4 \\
0 & 6 & -5 & 4 & 3 & | & 3 \\
2 & -2 & 2 & 6 & 9 & | & 9 \\
-3 & -5 & 2 & -3 & -8 & | & 7
\end{pmatrix}$$

$$\begin{pmatrix}
78 & 45 & -4 \\
67 & 37 & -63
\end{pmatrix}$$

$$\begin{pmatrix} 43 & -3 & -40 \\ -21 & -37 & -61 \\ -70 & -58 & -57 \\ 58 & 90 & -83 \end{pmatrix} \qquad \begin{pmatrix} 47 & 1 & 65 \\ -13 & -36 & 68 \\ 58 & -66 & 51 \end{pmatrix}$$

$$\begin{pmatrix}
3 & 1 & 3 \\
-3 & -3 & -4 \\
6 & -8 & -7 \\
4 & 4 & 1 \\
4 & -8 & -6
\end{pmatrix}$$

$$\begin{pmatrix}
280 & -322 & | & 721 \\
-505 & 421 & | & -775
\end{pmatrix}$$

$$\begin{pmatrix}
84 & -91 & 38 \\
59 & 93 & -52 \\
-8 & -81 & 25
\end{pmatrix}$$

$$\begin{vmatrix}
58 & -3 & -15 \\
-60 & -30 & -95 \\
65 & -96 & -9
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c} 39 & -89 & -75 & -27 \\ -98 & 74 & -71 & -13 \end{array}\right) \left(\begin{array}{ccc|c} 32 & -52 & 31 & 95 \\ -81 & 69 & -57 & -21 \end{array}\right)$$

$$\begin{vmatrix}
-97 & 38 & -34 & 55 \\
7 & 0 & 23 & -72 \\
-24 & 51 & -23 & 29 \\
-42 & -13 & 47 & 62
\end{vmatrix} \begin{vmatrix}
-8 & -2 & -8 & -4 & 7 & | & -7 \\
1 & 4 & 4 & -4 & -3 & | & 3 \\
0 & -3 & -1 & 5 & 8 & | & -8 \\
-2 & -2 & -1 & 6 & -5 & | & 4 \\
-7 & -3 & 1 & -1 & 0 & | & -6
\end{vmatrix}$$

$$\begin{vmatrix}
9 & -5 & 7 & -3 \\
-3 & -3 & -8 & 6 \\
-3 & 0 & 4 & -7 \\
2 & -2 & -3 & -9
\end{vmatrix}$$

$$\begin{pmatrix}
183 & -890 & 294 \\
338 & 909 & -472
\end{pmatrix}$$

$$\begin{pmatrix} -2 & -1 \\ -4 & 2 \\ -3 & 4 \\ 5 & 1 \end{pmatrix} \qquad \begin{pmatrix} 76 & 96 \\ 66 & 61 \\ -2 & 3 \\ 37 & -32 \\ -55 & -63 \end{pmatrix}$$

$$\left(\begin{array}{ccc|ccc|c}
-2 & 4 & 3 & -9 & 0 & 7 \\
-6 & 5 & 2 & -2 & -1 & 8 \\
9 & 9 & 1 & -8 & -4 & -9
\end{array}\right)
\left(\begin{array}{cccc|ccc|c}
-93 & 85 & 27 & 0 & -10 \\
3 & 23 & -63 & 39 & -31
\end{array}\right)$$

$$\begin{vmatrix}
21 & 14 & 60 & 53 \\
37 & 65 & 32 & -87 \\
1 & -58 & 92 & 23 \\
-95 & 49 & -92 & 99
\end{vmatrix}$$

$$\begin{pmatrix}
6 & 5 & 4 \\
-5 & 0 & 6 \\
-7 & 7 & 5 \\
3 & 2 & 2 \\
-5 & -2 & 3
\end{pmatrix}$$

$$\begin{vmatrix}
 -2 & -2 & -2 \\
 1 & 2 & 7 \\
 6 & 8 & 4
 \end{vmatrix}
 = 
 \begin{pmatrix}
 -69 & 20 & 59 \\
 -1 & 78 & -86
 \end{pmatrix}$$

$$\begin{pmatrix}
2 & 17 \\
58 & -12 \\
0 & 30
\end{pmatrix}
\qquad
\begin{pmatrix}
8 & 4 & 0 & -9 \\
4 & 0 & -1 & -9 \\
2 & -9 & 9 & 2
\end{pmatrix}$$

$$\left(\begin{array}{cccc}
-42 & -43 & 66 \\
86 & 61 & -62
\end{array}\right) \qquad \left|\begin{array}{ccccc}
2 & 4 & -7 \\
3 & 8 & -7 \\
-7 & -3 & 4
\end{array}\right|$$

$$\begin{pmatrix}
-2 & 8 & 8 & 2 & -2 & 5 \\
-4 & -1 & -4 & 5 & 3 & -8 \\
3 & -7 & -1 & -6 & 5 & -3 \\
2 & 9 & 2 & 3 & 2 & -2
\end{pmatrix}$$

$$\begin{pmatrix}
-6 & 6 & 0 \\
2 & -2 & 6
\end{pmatrix}$$

$$\begin{pmatrix}
27 & 35 \\
-9 & -81 \\
-2 & 31 \\
50 & -22
\end{pmatrix}
\qquad
\begin{vmatrix}
9 & -6 & -4 & -1 \\
2 & 0 & -6 & 4 \\
6 & 4 & 3 & -6 \\
1 & 4 & -8 & 3
\end{vmatrix}$$

$$\begin{pmatrix}
2 & -6 \\
-2 & 3 \\
5 & 8 \\
7 & 6
\end{pmatrix}
\qquad \begin{vmatrix}
-36 & 64 \\
-65 & 42
\end{vmatrix}$$

$$\begin{pmatrix} 6 & 3 & -8 \\ 6 & 4 & -9 \end{pmatrix} \quad \begin{pmatrix} -87 & -37 & 68 & 65 & -69 & 22 \\ 95 & 46 & 68 & 26 & 15 & -95 \\ 35 & -75 & 3 & 92 & 93 & 37 \end{pmatrix}$$

$$\begin{pmatrix} 42 & 61 & 83 & 88 & 60 \\ -53 & 64 & 2 & -97 & -59 \\ 89 & 4 & 10 & -17 & -8 \\ -73 & 78 & 45 & -25 & -53 \end{pmatrix} \quad \begin{pmatrix} -25 & 34 & -54 \\ -76 & 77 & 69 \end{pmatrix}$$

$$\begin{pmatrix} -149 & 130 & 651 \\ 983 & 921 & -307 \\ 110 & -999 & 565 \end{pmatrix} \begin{pmatrix} -2 & -3 & -3 & 7 & 9 & | & -3 \\ 9 & 9 & -1 & 2 & 9 & | & 0 \\ 5 & 6 & -9 & 3 & -8 & | & 4 \\ -3 & -5 & -4 & 2 & -7 & | & 8 \end{pmatrix}$$

$$\begin{pmatrix}
-70 & 5 & 79 \\
47 & 23 & 4 \\
22 & 76 & 3
\end{pmatrix}$$

$$\begin{vmatrix}
-18 & 19 & 64 & 57 \\
-82 & -36 & -31 & 33 \\
91 & -57 & 30 & -3 \\
67 & -10 & -25 & 99
\end{vmatrix}$$

$$\begin{pmatrix}
38 & 57 & 31 & 16 & -62 \\
84 & -24 & 67 & 88 & -42 \\
53 & -14 & -40 & -38 & -62
\end{pmatrix}
\begin{pmatrix}
6 & 7 & -2 & 6 & 2 & -3 \\
-8 & -4 & 6 & 9 & -7 & -1 \\
7 & 2 & 9 & -1 & 7 & 9 \\
3 & 0 & -4 & -2 & -9 & -1 \\
-2 & -7 & -2 & -5 & -5 & 4
\end{pmatrix}$$

$$\begin{vmatrix}
 3 & -7 & -8 & -1 \\
 2 & -3 & 7 & 2 \\
 5 & -9 & 2 & 8 \\
 -3 & 2 & -2 & 9
 \end{vmatrix}
 \begin{vmatrix}
 -24 & 38 \\
 51 & 95
 \end{vmatrix}$$

$$\begin{pmatrix}
6 & 5 \\
-1 & -2
\end{pmatrix}
\begin{pmatrix}
0 & -97 & -83 & -96 & 39 & | & 15 \\
18 & -50 & 0 & -96 & -40 & | & -55 \\
26 & 56 & 59 & -19 & -27 & | & -13 \\
61 & 51 & -90 & 35 & -8 & | & 87
\end{pmatrix}$$

$$\begin{vmatrix}
5 & -6 & 9 \\
5 & -5 & -3 \\
5 & 4 & -7
\end{vmatrix}$$

$$\begin{vmatrix}
3 & 8 & 9 \\
3 & -4 & 4 \\
-7 & 7 & -3
\end{vmatrix}$$

$$\begin{pmatrix} -84 & 81 \\ -46 & -82 \\ -86 & -62 \\ -6 & -24 \\ 41 & -59 \end{pmatrix} \qquad \begin{pmatrix} 76 & 24 & -76 & 65 & 92 \\ -85 & 65 & -25 & -99 & -97 \\ 15 & -92 & -68 & 93 & 4 \\ 27 & 7 & 48 & -36 & -73 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
7 & 5 & -7 & -4 \\
5 & 9 & 1 & 7
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-9 & 0 & 7 \\
-9 & 8 & 6
\end{array}\right)$$

$$\left(\begin{array}{ccc|c} -82 & 91 & -54 & 71 & -65 & 7 \\ -30 & -56 & -35 & -66 & -28 & -9 \end{array}\right) \left(\begin{array}{ccc|c} -1 & 0 & 2 & -7 & -3 \\ 2 & 0 & -8 & -4 & 1 \end{array}\right) -$$

$$\begin{vmatrix} 5 & 20 & 42 & -13 \\ -25 & 61 & 99 & 30 \\ 45 & -2 & -95 & 80 \\ 02 & 12 & 16 & 5 \end{vmatrix} \begin{pmatrix} -2 & -5 & -1 & -7 & -9 \\ 3 & 3 & 2 & -9 & 7 \end{pmatrix}$$

$$\left(\begin{array}{ccc|c}
5 & 2 & -3 & 8 \\
1 & -9 & -1 & 6
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
2 & 8 \\
-2 & -5
\end{array}\right)$$

$$\begin{vmatrix}
-2 & 2 \\
0 & -6
\end{vmatrix}
= 
\begin{pmatrix}
-6 & 6 & -8 & 0 & 6 & 9 \\
3 & 4 & 6 & 9 & -1 & 3 \\
2 & 1 & 9 & -8 & -9 & -7 \\
1 & 8 & -6 & -7 & -5 & -6 \\
3 & 6 & 6 & -7 & 7 & 8
\end{pmatrix}$$

$$\left( \begin{array}{ccc|ccc|c} 5 & -2 & 0 & -5 & 6 \\ 2 & -9 & -9 & -4 & 6 \\ 1 & 1 & 7 & -7 & 5 \end{array} \right) \, \left( \begin{array}{ccc|ccc|c} 86 & 72 & 30 & 34 & 68 \\ 9 & -28 & 64 & -19 & -33 \end{array} \right)$$

$$\begin{vmatrix} 8 & 0 & 0 \\ 5 & 6 & 5 \\ -7 & -1 & 1 \end{vmatrix} \begin{pmatrix} -83 & -9 & -7 & 48 & -66 & -48 \\ 92 & -18 & 15 & -38 & -57 & 29 \\ 65 & -56 & 7 & -75 & 69 & 88 \\ -84 & 9 & 10 & -44 & -71 & 75 \\ -95 & -17 & -78 & -95 & 95 & -20 \end{pmatrix}$$

$$\left(\begin{array}{cc}
31 & -99 \\
52 & -43
\end{array}\right) \qquad \left|\begin{array}{cc}
-7 & 4 \\
-9 & 8
\end{array}\right|$$

$$\begin{pmatrix}
-5 & -3 \\
-5 & -8
\end{pmatrix} \qquad \qquad \begin{pmatrix}
-9 & -5 & | & -1 \\
8 & 6 & | & 8
\end{pmatrix}$$

$$\left(\begin{array}{ccccc}
-5 & 9 & 5 & 2 & -8 \\
-3 & -2 & -1 & 0 & 2
\end{array}\right) \qquad \left|\begin{array}{cccccc}
62 & -30 \\
37 & -22
\end{array}\right|$$

$$\begin{pmatrix}
-7 & -7 & 0 & 0 & 0 \\
2 & -3 & 3 & 5 & 5 \\
-2 & 9 & 5 & -2
\end{pmatrix}$$

$$\begin{pmatrix}
-3 & 5 & 8 \\
-3 & -3 & -3
\end{pmatrix}$$

$$\begin{pmatrix} -87 & 53 \\ 82 & -8 \\ 2 & -61 \end{pmatrix} \qquad \begin{pmatrix} -6 & -49 \\ 41 & -56 \end{pmatrix}$$

$$\begin{pmatrix} 18 & 84 \\ 59 & -54 \\ 13 & -91 \\ 3 & -33 \end{pmatrix} \qquad \begin{pmatrix} 173 & -478 & -741 & -514 \\ -574 & -267 & 858 & 822 \end{pmatrix}$$

$$\begin{pmatrix}
-41 & -20 & 63 & 34 & -25 \\
13 & 32 & -61 & -2 & 50 \\
32 & 63 & -11 & -69 & -32
\end{pmatrix}
\begin{pmatrix}
-3 & 1 & 7 & 7 & 5 & 0 \\
4 & 2 & 2 & -9 & 2 & 3 \\
-4 & 6 & -6 & 2 & 6 & 3
\end{pmatrix}$$

$$\begin{vmatrix}
60 & 75 \\
62 & -24
\end{vmatrix}$$

$$\begin{vmatrix}
-73 & -89 & -17 \\
79 & 11 & 62 \\
-99 & -51 & 96
\end{vmatrix}$$

$$\begin{pmatrix}
-16 & -81 & 3 & 17 & -71 \\
-32 & 22 & -2 & 0 & -48 \\
13 & 31 & -91 & 57 & -33 \\
-20 & -8 & 25 & 19 & -81 \\
-62 & 87 & 76 & 12 & 21
\end{pmatrix} \qquad \begin{pmatrix}
-70 & 18 \\
63 & 38 \\
-30 & -39
\end{pmatrix}$$

$$\begin{pmatrix} 53 & 77 & -39 & 21 \\ -42 & 24 & 72 & 18 \\ -32 & -64 & 96 & 62 \\ -42 & -83 & -36 & 65 \\ -79 & -35 & 89 & -96 \end{pmatrix} \qquad \begin{pmatrix} 9 & -6 & 9 \\ 0 & 8 & 4 \\ -6 & -8 & -2 \end{pmatrix}$$

$$\left(\begin{array}{cc|c}
19 & 48 & 18 \\
-35 & -81 & 0
\end{array}\right) \qquad \left|\begin{array}{cc|c}
16 & 80 & -8 \\
51 & -23 & -52 \\
-97 & 41 & 53
\end{array}\right|$$

$$\begin{pmatrix}
-97 & -25 & 29 \\
74 & 32 & 57
\end{pmatrix} \qquad \qquad \begin{vmatrix}
-265 & 439 \\
-357 & 134
\end{vmatrix}$$

$$\begin{pmatrix} -6 & 9 & 1 & 6 & -5 & 3 \\ -2 & 3 & -9 & -8 & -3 & -6 \\ -4 & -5 & 5 & 7 & -8 & -7 \end{pmatrix} \begin{pmatrix} 118 & 252 & 562 \\ 141 & 651 & -870 \\ -813 & -562 & -752 \end{pmatrix}$$

$$\begin{vmatrix}
-4 & 5 \\
-9 & 5
\end{vmatrix} = \begin{pmatrix}
90 & 37 & 53 & -26 & -88 & | & -91 \\
91 & -25 & 14 & 3 & -46 & | & -29 \\
51 & -39 & 1 & 64 & -12 & 59 \\
84 & -75 & 13 & 68 & -37 & 21
\end{pmatrix}$$

$$\begin{pmatrix} -97 & -20 \\ 38 & -84 \end{pmatrix} \qquad \begin{pmatrix} -42 & 25 \\ -69 & -39 \\ 45 & 32 \\ -66 & 28 \\ -88 & 55 \end{pmatrix}$$

$$\begin{vmatrix}
-38 & 73 \\
30 & 84
\end{vmatrix}
\qquad \begin{pmatrix}
8 & 6 & 4 \\
5 & -8 & 7 \\
-7 & -7 & -4
\end{pmatrix}$$

$$\left(\begin{array}{ccc}
6 & -9 & -8 \\
5 & 8 & 2
\end{array}\right) \qquad \left|\begin{array}{cccc}
-18 & 57 & 37 \\
-75 & -95 & 23 \\
94 & -48 & -21
\end{array}\right|$$

$$\begin{vmatrix}
2 & 3 \\
-3 & 6
\end{vmatrix}$$

$$\begin{pmatrix}
-8 & -4 \\
-6 & -2 \\
-7 & -3 \\
-7 & 9 \\
-6 & 0
\end{pmatrix}$$

$$\left(\begin{array}{cc|c}
9 & -7 & 4 \\
0 & -2 & -3
\end{array}\right) \qquad \left|\begin{array}{cc|c}
-25 & -18 & 2 \\
-26 & -27 & 23 \\
-42 & -9 & 64
\end{array}\right|$$

$$\begin{vmatrix}
-335 & -472 & -604 \\
-956 & -460 & -874 \\
568 & 687 & 951
\end{vmatrix} \qquad \left(\begin{array}{cc|c} 76 & 34 & -17 \\
92 & -37 & 3 \end{array}\right)$$

$$\begin{pmatrix}
9 & 70 & -7 & -3 \\
-35 & -98 & -27 & -46 \\
-91 & 34 & 41 & 14
\end{pmatrix}
\qquad
\begin{pmatrix}
-30 & -47 \\
80 & 50 \\
-57 & -47
\end{pmatrix}$$

$$\begin{vmatrix}
-1 & 8 & 3 & -5 \\
6 & -3 & 3 & 9 \\
-1 & -8 & -5 & 3 \\
-3 & 9 & 0 & -5
\end{vmatrix}$$

$$\begin{pmatrix}
89 & 52 \\
-87 & 14 \\
78 & 75
\end{pmatrix}$$

$$\begin{vmatrix}
-68 & -58 & 74 \\
68 & -78 & 88 \\
-91 & 84 & 43
\end{vmatrix} = \begin{vmatrix}
-81 & 20 & 22 & -60 \\
-9 & 75 & 80 & -18 \\
-8 & -3 & 13 & 13 \\
0 & 66 & -56 & -9
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
4 & 0 & -5 & -9 \\
1 & -7 & 5 & -9
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-24 & -12 & -81 \\
-27 & -35 & 86 \\
37 & 44 & 30
\end{array}\right)$$

$$\left( \begin{array}{ccc|c} 77 & -68 & 54 & 8 & -73 \\ 61 & -5 & -78 & 15 & -45 \end{array} \right) \qquad \left( \begin{array}{ccc|c} 48 & -6 & -23 \\ 79 & -55 & -7 \end{array} \right)$$

$$\begin{vmatrix}
-280 & 196 \\
728 & -176
\end{vmatrix}
\qquad
\begin{pmatrix}
-753 & -791 \\
68 & -937
\end{pmatrix}$$

$$\begin{pmatrix} -25 & -45 \\ -80 & 13 \\ -68 & -62 \end{pmatrix} \qquad \begin{pmatrix} -2 & -1 & -8 & 5 & 9 \\ -6 & -7 & 2 & -2 & -9 \\ -7 & 6 & 9 & -6 & -7 \\ 2 & -7 & 4 & -5 & 8 \end{pmatrix}$$

$$\begin{vmatrix}
-53 & -75 & -56 & 68 \\
-21 & 63 & -57 & 15 \\
17 & 35 & 25 & -85 \\
-99 & 23 & 55 & 87
\end{vmatrix}$$

$$\begin{vmatrix}
-8 & 3 \\
9 & 0
\end{vmatrix}$$

$$\left( \begin{array}{cc|c} -24 & 62 & -64 & 1 \\ -94 & -6 & -47 & 59 \end{array} \right) \qquad \left( \begin{array}{cc|c} 5 & -7 & 3 & 3 \\ 9 & 8 & -9 & -5 \end{array} \right)$$

$$\left(\begin{array}{ccc|c}
-9 & -4 & 3 & -5 & -2 \\
4 & 1 & 1 & 3 & 8 \\
0 & -2 & 6 & 9 & 8
\end{array}\right) 
\left(\begin{array}{ccc|c}
-2 & -3 & -6 & -4 \\
-4 & -5 & 5 & 1
\end{array}\right)$$

$$\begin{vmatrix}
 4 & 4 & -5 \\
 0 & 6 & -7 \\
 -9 & 7 & -1
 \end{vmatrix}
 = 
 \begin{vmatrix}
 -89 & -22 \\
 -62 & 86
 \end{vmatrix}$$

$$\begin{pmatrix} 91 & 76 & 59 & 50 & 21 \\ -1 & -13 & -53 & -67 & -32 \\ -22 & -91 & 61 & 95 & -20 \\ -70 & -76 & -17 & -29 & -6 \end{pmatrix} \begin{pmatrix} 17 & -41 & -8 \\ 15 & -60 & -44 \end{pmatrix}$$

$$\begin{pmatrix} -1 & -1 & 4 & 1 \\ -4 & 9 & -2 & 7 \\ -8 & 0 & 3 & -1 \\ -8 & 0 & -6 & 3 \\ 4 & 7 & -5 & -4 \end{pmatrix} \qquad \begin{pmatrix} 1 & 7 & -9 & -3 & -1 \\ 7 & -6 & 3 & 9 & -4 \end{pmatrix}$$

$$\begin{pmatrix}
97 & -151 & -774 \\
10 & 178 & -714 \\
70 & -683 & -339
\end{pmatrix}$$

$$\begin{pmatrix}
5 & -3 & 4 & 0 \\
-6 & 9 & 5 & 7 \\
-3 & 3 & 1 & 8
\end{pmatrix}$$

$$\begin{vmatrix} -7 & -21 & -23 & 82 \\ -43 & 16 & 47 & -31 \\ 53 & -78 & -30 & 91 \\ -53 & 17 & 33 & -88 \end{vmatrix} \begin{pmatrix} 1 & 5 & -8 & -6 & -4 & 2 \\ -7 & 3 & -2 & -9 & 5 & -7 \\ 8 & 0 & 8 & -7 & 9 & 4 \end{pmatrix}$$

$$\left(\begin{array}{ccc|ccc|c}
7 & -9 & -3 & 4 & 9 & 4 \\
6 & -3 & 1 & 9 & 9 & -3 \\
9 & 0 & -9 & -6 & -3 & -5
\end{array}\right) \quad \left|\begin{array}{cccc|c}
4 & -3 & -8 \\
-2 & -6 & 7 \\
-7 & -7 & -9
\end{array}\right|$$

$$\begin{pmatrix}
-1 & 0 & 3 & -8 \\
7 & 8 & -8 & 8 \\
9 & 6 & -6 & -7
\end{pmatrix}$$

$$\begin{vmatrix}
-4 & 5 & 2 & -1 \\
6 & 9 & 4 & -7 \\
5 & -5 & -1 & 0 \\
1 & 2 & 3 & 0
\end{vmatrix}$$

$$\begin{pmatrix} 82 & 93 \\ 68 & 12 \\ 83 & -55 \end{pmatrix} \qquad \begin{pmatrix} 0 & 2 & -8 & 6 & 6 \\ 1 & -4 & -3 & -5 & -1 \end{pmatrix}$$

$$\begin{pmatrix} -56 & -31 \\ -48 & 72 \\ 41 & -1 \end{pmatrix} \qquad \begin{pmatrix} -9 & 7 & -3 & -2 & 3 \\ 5 & 5 & -4 & 6 & -2 \end{pmatrix}$$

$$\left(\begin{array}{cccc|c}
-2 & 3 & -7 & 7 & -7 \\
8 & 9 & -8 & -3 & -6
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
-1 & -6 & -1 \\
7 & 7 & -1
\end{array}\right)$$

$$\begin{vmatrix}
49 & -34 & 5 \\
-30 & 38 & 27 \\
-57 & -61 & -30
\end{vmatrix}$$

$$\begin{vmatrix}
-36 & -25 \\
-10 & 72
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c} -3 & -5 & -4 & -5 & 2 \\ -3 & 6 & -6 & 2 & 1 \end{array}\right) \left(\begin{array}{ccc|c} -93 & -90 & 9 & -88 & 10 \\ 95 & 52 & 8 & -88 & -68 \end{array}\right)$$

$$\begin{pmatrix}
0 & -6 & 3 & 2 \\
0 & -2 & 2 & -2 \\
2 & -5 & 9 & 3 \\
1 & 9 & 6 & -8 \\
6 & -5 & -2 & 1
\end{pmatrix}$$

$$\begin{vmatrix}
318 & -550 \\
332 & -462
\end{vmatrix}$$

$$\begin{pmatrix}
-967 & -851 & -945 \\
289 & 147 & -262
\end{pmatrix} \qquad \qquad \begin{pmatrix}
2 & 9 \\
-9 & 3
\end{pmatrix}$$

$$\begin{pmatrix} -633 & -884 & 9 & 52 & | & -622 \\ 874 & -171 & -866 & -855 & | & -817 \\ -703 & -174 & -140 & -796 & | & 959 \\ 718 & -89 & -706 & 3 & | & 760 \end{pmatrix} \begin{pmatrix} 1 & -9 & | & -2 \\ 8 & -5 & | & 8 \end{pmatrix}$$

$$\left(\begin{array}{cccc}
-231 & 822 & 800 \\
167 & -593 & 445
\end{array}\right) \qquad \left|\begin{array}{ccccc}
3 & 5 & -2 \\
-4 & -7 & 5 \\
6 & -8 & 3
\end{array}\right|$$

$$\begin{pmatrix}
-5 & 2 & 4 & -7 & | & -2 \\
-3 & -4 & 6 & -4 & | & -2 \\
2 & 9 & 3 & 3 & | & -1
\end{pmatrix}
\begin{pmatrix}
-4 & -81 & 10 & -17 & -62 \\
67 & -61 & -64 & 0 & -62
\end{pmatrix}$$

$$\begin{pmatrix}
-2 & -3 & -7 & 5 \\
-5 & -3 & -6 & 9 \\
4 & 1 & 4 & -1
\end{pmatrix}$$

$$\begin{pmatrix}
3 & 6 & 8 \\
1 & 0 & -7
\end{pmatrix}$$

$$\left(\begin{array}{cc|c}
3 & 1 & 6 \\
-1 & 8 & 4
\end{array}\right) \qquad \left|\begin{array}{cccc}
4 & -7 & 3 \\
-9 & 6 & 3 \\
-3 & 8 & 3
\end{array}\right|$$

$$\begin{pmatrix}
43 & -10 & -7 & 20 \\
47 & -70 & 97 & 94
\end{pmatrix}$$

$$\begin{vmatrix}
5 & -59 & 52 & 31 \\
52 & 12 & 39 & 13 \\
37 & -23 & -2 & 83 \\
-24 & 88 & 22 & -74
\end{vmatrix}$$

$$\begin{pmatrix}
92 & -83 \\
-3 & 89
\end{pmatrix} \qquad \begin{pmatrix}
38 & 68 & -37 & 15 \\
29 & -38 & 45 & -8
\end{pmatrix}$$

$$\begin{pmatrix}
-80 & 27 & 87 \\
-9 & -91 & 26
\end{pmatrix}$$

$$\begin{vmatrix}
-55 & -69 & 62 & 82 \\
-80 & -40 & 73 & -51 \\
23 & -14 & -69 & 2 \\
35 & -53 & -65 & -29
\end{vmatrix}$$

$$\left(\begin{array}{cc|c}
-8 & 7 & 4 & -8 \\
-6 & 7 & 7 & 1
\end{array}\right) \qquad \left(\begin{array}{cc|c}
351 & -829 & -370 \\
458 & -812 & -387
\end{array}\right)$$

$$\begin{pmatrix}
8 & 8 & 4 & -6 \\
0 & 5 & -2 & 7
\end{pmatrix}$$

$$\begin{pmatrix}
21 & 82 & -28 \\
12 & -68 & -89 \\
66 & -7 & -62 \\
-79 & 89 & -41 \\
95 & -52 & 15
\end{pmatrix}$$

$$\begin{pmatrix} -7 & -41 & -27 & 72 \\ -50 & 13 & -92 & -23 \\ 58 & -32 & 65 & 4 \end{pmatrix} \qquad \begin{pmatrix} -8 & -9 \\ 7 & -9 \end{pmatrix}$$

$$\begin{pmatrix} 559 & -798 & 687 & 285 & | & -737 \\ -61 & -881 & 155 & -61 & 965 \\ 491 & -916 & 298 & 941 & | & -358 \\ 230 & 401 & -935 & 168 & | & -944 \end{pmatrix} \begin{pmatrix} -487 & -813 \\ 217 & 869 \end{pmatrix}$$

$$\begin{pmatrix}
-5 & -9 & 4 & -5 & -6 & | & -9 \\
-4 & -8 & -1 & 9 & 7 & | & -3 \\
9 & -3 & 8 & 5 & -6 & | & 9 \\
7 & 0 & -6 & -8 & 8 & | & -1
\end{pmatrix}$$

$$\begin{pmatrix}
-8 & -7 & | & 0 \\
7 & 1 & | & 1
\end{pmatrix}$$

$$\begin{pmatrix}
5 & -9 & -5 & 8 & -5 & | & 4 \\
-5 & -3 & 3 & -6 & -4 & | & -5 \\
-4 & -5 & 6 & -6 & 7 & | & -1 \\
4 & 6 & 3 & -5 & 5 & | & 6
\end{pmatrix}
\begin{pmatrix}
-869 & 661 \\
740 & 10 \\
2 & -44 \\
-349 & 324 \\
852 & -785
\end{pmatrix}$$

$$\begin{pmatrix}
-7 & 2 & 0 & 5 & | & -4 \\
-7 & -3 & 4 & -9 & | & -7 \\
-9 & -4 & 8 & 0 & | & -1 \\
0 & -9 & -5 & 2 & | & -2
\end{pmatrix}$$

$$\begin{pmatrix}
-1 & 6 & -8 \\
-6 & -7 & 3 \\
-4 & -1 & -8 \\
-8 & 1 & 3
\end{pmatrix}$$

$$\begin{vmatrix}
-1 & 2 & -7 & 9 \\
8 & 9 & 6 & -5 \\
1 & -5 & 7 & -3 \\
6 & -6 & -7 & 5
\end{vmatrix}$$

$$\begin{pmatrix}
6 & 6 & 5 & 2 & 4 & | -9 \\
5 & 2 & 0 & -1 & -4 & | 2
\end{pmatrix}$$

$$\begin{vmatrix}
-1 & 0 & -3 \\
-7 & -4 & -6 \\
1 & 4 & -3
\end{vmatrix}
\qquad
\begin{pmatrix}
3 & 9 & -7 & 8 & | & -1 \\
-2 & -9 & 1 & 5 & | & -3 \\
-7 & -5 & -3 & -1 & | & 5
\end{pmatrix}$$

$$\left(\begin{array}{cccc}
-45 & -1 & 43 \\
39 & -92 & 7
\end{array}\right) \qquad \left(\begin{array}{ccccc}
9 & 7 & -9 & -5 & | & 8 \\
-7 & 8 & 5 & 6 & | & 8
\end{array}\right)$$

$$\begin{pmatrix}
94 & -25 & 13 & 82 & | & -83 \\
-91 & 89 & -28 & -13 & | & -10
\end{pmatrix}$$

$$\begin{pmatrix}
60 & -32 \\
-27 & 90 \\
-22 & -10 \\
98 & 24 \\
95 & 49
\end{pmatrix}$$

$$\left(\begin{array}{cc|c} -6 & -7 & -8 \\ -8 & 6 & 2 \end{array}\right) \qquad \left|\begin{array}{cc|c} -345 & 374 \\ -358 & 151 \end{array}\right|$$

$$\left(\begin{array}{ccc|c} 9 & -20 & 65 & 98 \\ 68 & 88 & 85 & -64 \end{array}\right) \left(\begin{array}{ccc|c} -926 & -734 & 735 & 336 \\ 217 & -746 & -840 & 752 \end{array}\right)$$

$$\begin{pmatrix}
-5 & 4 & 5 & -4 \\
-9 & 7 & 8 & 1
\end{pmatrix}
\qquad
\begin{pmatrix}
-9 & -5 & -6 \\
-8 & -2 & 8 \\
-4 & -7 & -6 \\
7 & -3 & 7
\end{pmatrix}$$

$$\begin{pmatrix} -9 & 6 & -9 \\ 9 & -8 & -8 \\ 8 & -9 & 4 \\ -9 & 9 & -3 \end{pmatrix} \qquad \begin{pmatrix} 83 & 41 & -72 \\ -16 & -43 & -97 \\ 57 & 94 & -13 \end{pmatrix}$$

$$\begin{pmatrix}
1 & -7 & 4 \\
7 & 6 & -6 \\
-3 & -7 & 2 \\
6 & 9 & 5
\end{pmatrix}$$

$$\begin{pmatrix}
87 & 2 & 29 & | -54 \\
83 & 32 & -13 & | 30
\end{pmatrix}$$

$$\begin{pmatrix}
-6 & -8 & | & -7 \\
2 & 7 & | & -9
\end{pmatrix}$$

$$\begin{vmatrix}
-79 & -45 & 47 & -64 \\
75 & -89 & -61 & -3 \\
47 & -1 & 82 & -18 \\
-62 & 6 & 27 & -91
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c} -4 & -2 & 7 & 1 & -2 \\ 2 & -9 & 7 & -3 & 9 \end{array}\right) \left(\begin{array}{ccc|c} -3 & -80 & 12 & 72 \\ 22 & -93 & 13 & -79 \\ -27 & -9 & -47 & -84 \end{array}\right)$$

$$\begin{pmatrix} 402 & -257 & 459 & 218 & 781 & 339 \\ 267 & 940 & 13 & -87 & 636 & 438 \\ 749 & 945 & 125 & 756 & 827 & 977 \\ 353 & -528 & -682 & -790 & 739 & 234 \\ -763 & 475 & 786 & 866 & -24 & 9 \end{pmatrix} \begin{pmatrix} -75 & -20 & 53 & 88 \\ -60 & -55 & 85 & 49 \\ -61 & 76 & 98 & -89 \\ -61 & 76 & 98 & -89 \\ -61 & 76 & 98 & -89 \\ -61 & 76 & 98 & -89 \\ -61 & 76 & 98 & -89 \\ -61 & 76 & 98 & -89 \\ -61 & 76 & 98 & -89 \\ -61 & 76 & 98 & -89 \\ -61 & 76 & 98 & -89 \\ -61 & 76 & 98 & -89 \\ -80 & -80 & -80 \\ -80 & -80$$

$$\left(\begin{array}{cc|c}
80 & 46 & -33 \\
-55 & -38 & 28
\end{array}\right) \qquad \left|\begin{array}{cc|c}
-169 & 547 & -246 \\
-464 & 790 & -65 \\
-774 & -385 & -738
\end{array}\right|$$

$$\left(\begin{array}{ccc|c}
8 & 6 & 5 \\
-9 & 4 & 6
\end{array}\right) \qquad \left(\begin{array}{ccc|c}
2 & 8 & 7 & 9 & 8 \\
7 & 5 & -9 & -2 & -8
\end{array}\right)$$

$$\begin{pmatrix} 17 & -32 & -22 & 84 & 68 \\ 88 & -50 & -22 & 1 & 83 \\ 33 & 15 & -91 & -19 & 55 \end{pmatrix} \quad \begin{pmatrix} -32 & 37 & -22 \\ 48 & -9 & -13 \end{pmatrix}$$

$$\begin{pmatrix}
7 & 1 & 9 & | & -4 \\
-7 & 4 & 4 & | & 7 \\
-2 & -7 & 6 & | & -5
\end{pmatrix}
\qquad
\begin{pmatrix}
-1 & 6 & | & 4 \\
-4 & -1 & | & 1
\end{pmatrix}$$

$$\left(\begin{array}{ccc|c} 4 & -7 & 6 & -7 & -3 & -9 \\ -1 & 8 & -5 & -2 & 2 & 5 \end{array}\right) \quad \left(\begin{array}{ccc|c} -8 & 4 & -9 \\ 7 & -3 & -7 \end{array}\right)$$

$$\begin{vmatrix} 772 & 496 & -442 \\ 526 & 717 & -892 \\ 351 & 669 & -721 \end{vmatrix} \begin{pmatrix} -11 & 62 & -73 & -77 & 42 \\ -73 & -57 & -97 & -50 & 34 & 48 \\ -45 & -17 & -98 & 17 & -59 & -49 \\ 12 & 16 & -49 & 85 & -1 & 50 \end{vmatrix}$$

$$\begin{pmatrix}
16 & -38 & 53 & -72 \\
18 & 8 & -74 & 24 \\
-13 & 31 & -63 & -19 \\
93 & 31 & -88 & -68
\end{pmatrix}$$

$$\begin{pmatrix}
2 & 4 \\
1 & -5
\end{pmatrix}$$

$$\begin{pmatrix}
1 & -4 & -4 & -8 & 3 \\
-6 & 4 & -1 & 4 & -8 \\
7 & 9 & -1 & 1 & -5 \\
8 & -4 & -1 & -3 & -9
\end{pmatrix}$$

$$\begin{pmatrix}
4 & 4 & | & 4 \\
-7 & 5 & | & 6
\end{pmatrix}$$

$$\begin{pmatrix} -68 & -95 & 9\\ 96 & -81 & -79\\ 99 & -23 & -59\\ 46 & -87 & -40 \end{pmatrix} \qquad \begin{pmatrix} 186 & -44\\ -599 & 232 \end{pmatrix}$$

$$\begin{pmatrix}
44 & 27 & 68 & -70 & 34 \\
-25 & -39 & 80 & -34 & -63 \\
51 & -7 & -87 & -53 & -23 \\
26 & -40 & -13 & 77 & -25
\end{pmatrix}$$

$$\begin{vmatrix}
70 & 3 & | \\
15 & 59 & | \\
 \end{vmatrix}$$

$$\left(\begin{array}{ccccc}
855 & 501 & 91 & 572 \\
-96 & -209 & 858 & -126
\end{array}\right) \qquad \left|\begin{array}{cccccc}
-42 & 99 \\
-3 & 26
\end{array}\right|$$

$$\left(\begin{array}{cc}
1 & 8 \\
4 & 7
\end{array}\right) \qquad \left(\begin{array}{cc}
5 & 5 \\
2 & 0
\end{array}\right)$$

$$\begin{vmatrix} 28 & -65 & -7 \\ -92 & -63 & -35 \\ 95 & -52 & 92 \end{vmatrix} \begin{pmatrix} -786 & 983 & -986 & -187 & 549 & 679 \\ 856 & 990 & -309 & 166 & -541 & 907 \\ 670 & 940 & 937 & 8 & -586 & 853 \end{pmatrix}$$

$$\begin{pmatrix}
0 & -8 \\
-8 & -5 \\
-3 & 0
\end{pmatrix} \qquad \qquad \begin{pmatrix}
3 & 8 & 9 \\
3 & 4 & -2
\end{pmatrix}$$

$$\begin{pmatrix} -799 & 225 & 399 & -158 \\ 808 & 569 & 124 & -441 \\ -722 & 778 & -918 & -669 \\ -399 & 833 & -424 & 458 \end{pmatrix} \qquad \begin{vmatrix} -10 & -98 \\ -38 & -50 \end{vmatrix}$$

$$\left| \begin{array}{cc|c}
8 & -4 \\
1 & 3
\end{array} \right| 
\left| \begin{array}{cc|c}
6 & -6 & 6 \\
5 & -3 & 0 \\
1 & -7 & 2
\end{array} \right|$$

$$\left( \begin{array}{ccc|c} 5 & -6 & -4 & 6 & -1 \\ 4 & 7 & -6 & -9 & 4 \\ -1 & 1 & -4 & -8 & -7 \end{array} \right) \quad \left( \begin{array}{ccc|c} -9 & 3 & 9 & -1 \\ -6 & 5 & 5 & -3 \\ -5 & -2 & 3 & -8 \end{array} \right)$$

$$\left(\begin{array}{cc|c}
19 & 67 & 20 \\
98 & 28 & 56
\end{array}\right) \qquad \left(\begin{array}{cc|c}
8 & 16 \\
-51 & -78
\end{array}\right)$$

$$\begin{pmatrix} 48 & 46 & 42 & -22 & 6 \\ 67 & 17 & 0 & 0 & -39 \\ 88 & 70 & -1 & -24 & 98 \\ 98 & -30 & 33 & -53 & -69 \end{pmatrix} \begin{pmatrix} -3 & -37 & 93 & 73 \\ 16 & -64 & -22 & 60 \end{pmatrix}$$

$$\begin{vmatrix}
-2 & -1 & 4 \\
-3 & 8 & -8 \\
-1 & -9 & 5
\end{vmatrix}$$

$$\begin{pmatrix}
-5 & 6 & 6 \\
4 & -4 & -5
\end{pmatrix}$$

$$\begin{vmatrix}
 -4 & 4 \\
 3 & 7
 \end{vmatrix}
 \begin{vmatrix}
 -3 & -4 & -2 & 2 \\
 6 & 6 & -9 & 2 \\
 -9 & 3 & 8 & 0 \\
 6 & 0 & -3 & 6
 \end{vmatrix}$$

$$\begin{pmatrix}
-1 & 93 & 93 & 63 \\
-19 & -11 & 26 & -4 \\
-32 & -16 & 97 & -28
\end{pmatrix}
\begin{pmatrix}
-3 & -2 & -1 & -5 & 5 \\
1 & 7 & 2 & 9 & 2
\end{pmatrix}$$

$$\begin{pmatrix} -7 & -5 & -8 \\ -4 & -1 & 7 \\ -6 & -9 & -7 \\ 4 & -8 & 1 \end{pmatrix} \qquad \begin{pmatrix} -9 & 96 & | & -36 \\ 85 & 68 & | & 27 \end{pmatrix}$$

$$\begin{vmatrix}
9 & -6 & -8 & -1 \\
-1 & -2 & -9 & 3 \\
9 & 3 & 2 & -6 \\
-3 & -6 & -7 & 7
\end{vmatrix}
\begin{vmatrix}
3 & -8 & 9 & 2 \\
-3 & -7 & -6 & -5 \\
-3 & -8 & 0 & -1 \\
-4 & 7 & 2 & 5
\end{vmatrix}$$

$$\begin{pmatrix}
6 & -7 \\
-4 & -5
\end{pmatrix}$$

$$\begin{vmatrix}
-8 & 7 & 9 & 5 \\
-1 & -3 & 7 & -9 \\
4 & -8 & -7 & -9 \\
-7 & 2 & -7 & 2
\end{vmatrix}$$

$$\begin{vmatrix} 780 & 510 & 613 & 523 \\ 68 & -383 & -340 & 521 \\ -345 & 261 & 317 & -851 \\ -183 & 162 & 951 & 106 \end{vmatrix} \begin{pmatrix} -52 & 80 & -61 \\ 29 & -13 & 48 \end{pmatrix}$$

$$\begin{vmatrix}
8 & -8 & 7 \\
-1 & -9 & 2 \\
6 & -4 & -6
\end{vmatrix}$$

$$\begin{vmatrix}
78 & -26 & 9 \\
70 & 27 & 9 \\
30 & 72 & 39
\end{vmatrix}$$

$$\left(\begin{array}{ccc|c}
-43 & 35 & -77 & -75 \\
5 & -94 & -4 & 87
\end{array}\right) \qquad \left|\begin{array}{cccc|c}
9 & -7 & 4 & -6 \\
-9 & 7 & 0 & -8 \\
0 & 1 & -8 & -7 \\
-4 & 7 & 1 & -7
\end{array}\right|$$

$$\begin{vmatrix}
891 & -116 & 869 \\
-639 & 223 & 275 \\
66 & 670 & -336
\end{vmatrix}$$

$$\begin{pmatrix}
-32 & -1 \\
-75 & 60 \\
-72 & -42
\end{pmatrix}$$

$$\begin{pmatrix}
-2 & 9 & -5 & 9 \\
4 & -7 & -9 & -3 \\
-5 & 5 & -1 & 6
\end{pmatrix} \qquad \qquad \begin{pmatrix}
0 & 2 & 8 \\
7 & 5 & -5 \\
-9 & -2 & -7 \\
1 & -7 & 2
\end{pmatrix}$$

$$\begin{pmatrix}
-636 & -711 & 344 \\
203 & 652 & 622 \\
-585 & 928 & 419
\end{pmatrix}$$

$$\begin{vmatrix}
-4 & 2 & 6 \\
8 & -8 & -3 \\
6 & -1 & -5
\end{vmatrix}$$

$$\left(\begin{array}{cc|c}
0 & -5 & 6 \\
-6 & 4 & 5
\end{array}\right) \qquad \left(\begin{array}{cc|c}
5 & 8 & -1 & 4 & 2 \\
8 & 9 & 5 & 8 & -3
\end{array}\right)$$

$$\left| \begin{array}{cc|c}
-1 & 2 \\
7 & 7
\end{array} \right| \qquad \left( \begin{array}{cc|c}
7 & 4 & 3 \\
0 & 3 & -2
\end{array} \right)$$

$$\begin{vmatrix}
 4 & -3 \\
 7 & -2
 \end{vmatrix}
 = 
 \begin{pmatrix}
 -5 & 9 \\
 2 & -7 \\
 -5 & 1 \\
 8 & 6 \\
 -4 & -3
 \end{pmatrix}$$

$$\begin{vmatrix}
-2 & 0 & 8 \\
-3 & 7 & -1 \\
-4 & 5 & 8
\end{vmatrix}$$

$$\begin{pmatrix}
-79 & 18 \\
49 & -40 \\
22 & -76
\end{pmatrix}$$

$$\left(\begin{array}{cc|c}
1 & 8 & 8 \\
8 & 4 & 6
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-17 & -75 & 0 \\
-31 & -75 & 70 \\
-17 & 87 & 47
\end{array}\right)$$

$$\left( \begin{array}{ccc|c} -96 & 51 & -35 & -37 & -99 & 8 \\ 25 & 67 & 77 & 24 & 46 & -55 \end{array} \right) \quad \left( \begin{array}{ccc|c} 8 & 7 & -2 \\ 1 & 2 & 0 \end{array} \right)$$

$$\begin{pmatrix} -24 & -69 \\ -88 & 65 \end{pmatrix} \qquad \begin{vmatrix} -9 & 7 & -1 \\ -3 & 3 & -6 \\ -4 & 4 & -2 \end{vmatrix}$$

$$\begin{vmatrix}
-8 & -5 & -1 & -2 \\
-3 & 3 & -7 & 3 \\
-3 & 4 & 1 & -9 \\
-7 & 7 & -4 & 1
\end{vmatrix}$$

$$\begin{vmatrix}
12 & -48 \\
-4 & 99
\end{vmatrix}$$

$$\begin{pmatrix} -63 & -72 & -82 & -70 & 21 & | & -65 \\ -24 & 76 & -73 & -36 & -69 & | & -83 \\ -80 & -6 & 83 & 42 & -5 & | & 82 \end{pmatrix} \begin{pmatrix} -12 & -39 & 89 \\ 56 & -69 & 59 \\ -74 & -78 & 95 \end{pmatrix}$$

$$\begin{pmatrix}
5 & -7 \\
7 & 0 \\
5 & 1
\end{pmatrix}
\qquad
\begin{vmatrix}
12 & 27 & -27 \\
-91 & 2 & -62 \\
-86 & -75 & 43
\end{vmatrix}$$

$$\left(\begin{array}{cccc|c}
8 & -4 & 1 & -3 & -1 \\
5 & 0 & 1 & -1 & -4
\end{array}\right)
\left(\begin{array}{cccc|c}
1 & -3 & -3 & -9 & 3 \\
-8 & -5 & -8 & 0 & -6 \\
8 & -3 & 9 & 7 & -1 \\
6 & -6 & 3 & -8 & 0
\end{array}\right)$$

$$\begin{pmatrix}
-79 & 80 & -96 & | & -97 \\
98 & -73 & 46 & | & -28
\end{pmatrix}$$

$$\begin{pmatrix}
-72 & 54 \\
83 & -83 \\
-6 & 63 \\
-46 & 25 \\
9 & -5
\end{pmatrix}$$

$$\begin{vmatrix}
-8 & -3 & -8 \\
-2 & 2 & -9 \\
-2 & -4 & -9
\end{vmatrix}
= \begin{vmatrix}
837 & 675 & 531 \\
-100 & -551 & 615 \\
-384 & -605 & -652
\end{vmatrix}$$

$$\begin{pmatrix} -15 & 77 & -98 & -52 \\ -90 & 77 & 0 & -7 \end{pmatrix} \qquad \begin{pmatrix} -32 & 60 & -61 \\ 18 & -56 & 53 \end{pmatrix}$$

$$\begin{pmatrix}
12 & -17 \\
2 & 71 \\
48 & -75
\end{pmatrix}
\qquad
\begin{vmatrix}
-5 & 9 & 4 \\
2 & -2 & 8 \\
2 & 3 & 8
\end{vmatrix}$$

$$\left(\begin{array}{cc|c} -179 & -817 & -72 \\ 619 & -745 & 929 \end{array}\right) \qquad \left(\begin{array}{cc|c} 4 & -4 & -4 & -5 \\ -9 & -7 & 3 & 3 \end{array}\right)$$

$$\begin{pmatrix}
82 & 52 & -62 & -38 & 82 & 92 \\
-48 & 69 & -25 & -94 & 23 & 39 \\
17 & 9 & -54 & -93 & -49 & 88 \\
-67 & -55 & -42 & -61 & 49 & 98 \\
60 & 66 & 74 & 2 & -47 & 3
\end{pmatrix}
\begin{vmatrix}
-2 & 4 & -6 & 1 \\
1 & -2 & 2 & 1 \\
8 & -5 & 4 & 1
\end{vmatrix}$$

$$\begin{pmatrix}
-35 & 34 & -41 & -61 \\
-72 & 73 & 49 & -52 \\
-35 & 0 & -43 & -72
\end{pmatrix}
\begin{vmatrix}
-5 & 5 & -4 \\
-7 & -5 & 8 \\
-3 & -5 & 6
\end{vmatrix}$$

$$\begin{vmatrix}
5 & 3 & -6 \\
1 & -7 & -1 \\
9 & 8 & -2
\end{vmatrix}$$

$$\begin{pmatrix}
0 & 0 & | -2 \\
7 & -3 & | -1
\end{pmatrix}$$

$$\begin{vmatrix}
-175 & 183 & -394 \\
-796 & 732 & -433 \\
144 & -652 & 517
\end{vmatrix}$$

$$\begin{vmatrix}
7 & 1 & 5 \\
-9 & -7 & -7 \\
-3 & 7 & 9
\end{vmatrix}$$

$$\begin{pmatrix}
1 & -7 & -4 & 5 \\
4 & 2 & -4 & 9 \\
7 & 6 & -1 & -6 \\
0 & 5 & 3 & -2
\end{pmatrix}$$

$$\begin{pmatrix}
9 & -8 & | & -2 \\
3 & -2 & | & 4
\end{pmatrix}$$

$$\begin{pmatrix}
33 & 76 & -62 \\
-7 & -93 & -14 \\
60 & -83 & 20
\end{pmatrix}
\qquad
\begin{pmatrix}
-7 & 0 & 5 & -4 & | & 1 \\
9 & 4 & -3 & 1 & | & -8
\end{pmatrix}$$

$$\begin{pmatrix}
49 & 50 & -49 & 45 & 75 & | & 47 \\
-26 & 93 & -15 & -99 & -12 & | & -83 \\
-43 & -22 & 62 & -17 & -7 & | & 68
\end{pmatrix}
\begin{pmatrix}
6 & 0 & 7 & 0 \\
6 & -7 & 5 & 7
\end{pmatrix}$$

$$\begin{pmatrix}
-7 & 9 & -9 & -2 & -7 & 1 \\
-2 & 5 & -7 & 5 & -9 & 0 \\
-5 & 9 & 2 & -1 & -4 & -5 \\
-4 & 6 & -9 & -9 & 6 & 2 \\
1 & 4 & 0 & -8 & -6 & -1
\end{pmatrix}$$

$$\begin{pmatrix}
9 & -7 & -4 \\
3 & 2 & 0
\end{pmatrix}$$

$$\left|\begin{array}{ccc|c} 9 & -5 \\ 87 & 87 \end{array}\right| \qquad \left(\begin{array}{ccc|c} 29 & -45 & -84 & 36 & 51 & 90 \\ 94 & -83 & -36 & 79 & 29 & 89 \\ -1 & -21 & -62 & -90 & -1 & -52 \end{array}\right)$$

$$\begin{pmatrix}
-3 & 1 & -4 & 7 & 3 \\
4 & -7 & 8 & -6 & -4 \\
4 & -2 & 8 & 5 & -3
\end{pmatrix}$$

$$\begin{pmatrix}
-98 & 28 \\
-25 & -84 \\
-1 & 57 \\
-31 & 22 \\
44 & -31
\end{pmatrix}$$

$$\left(\begin{array}{cc|c}
577 & 220 & 25 \\
-943 & -96 & 765
\end{array}\right) \qquad \left|\begin{array}{cc|c}
-7 & -7 \\
9 & 5
\end{array}\right|$$

$$\begin{pmatrix}
-7 & 4 \\
6 & 7 \\
6 & 5
\end{pmatrix} \qquad \qquad \begin{pmatrix}
45 & 22 & | & -93 \\
80 & 45 & | & 73
\end{pmatrix}$$

$$\begin{vmatrix}
9 & -5 & 4 & 0 \\
-2 & -7 & 1 & -2 \\
5 & 0 & 7 & -1 \\
-9 & 5 & 5 & -4
\end{vmatrix}$$

$$\begin{vmatrix}
9 & 2 & 9 \\
-8 & -5 & 9 \\
-9 & -3 & 4
\end{vmatrix}$$

$$\left(\begin{array}{cc|c}
16 & -5 & -87 \\
23 & 48 & -44
\end{array}\right) \qquad \left(\begin{array}{cc|c}
-1 & 50 \\
-98 & -76
\end{array}\right)$$

$$\begin{pmatrix}
-4 & 4 & 5 & -6 & 0 \\
-6 & -6 & -8 & 7 & 1 \\
5 & 1 & 2 & -5 & -3 \\
-8 & 4 & -4 & 9 & -1
\end{pmatrix}$$

$$\begin{pmatrix}
-97 & -66 & -62 \\
-52 & 5 & 93
\end{pmatrix}$$