# Matrix Practice Answer

### CBDT

## September 9, 2024

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**15** 

**29** 

# Contents

1 Matrix Multiplication

3 Matrix Determinant

2 Matrix Inverse

1	Matrix	Multiplie	catio	n
ansv			[83 48	$\begin{bmatrix} -60 \\ -81 \end{bmatrix}$
ansv ansv			$\begin{bmatrix} -6 \\ -36 \end{bmatrix}$	$\begin{bmatrix} -80 \\ -10 \end{bmatrix}$
ansv ansv			$\begin{bmatrix} 8 \\ -4 \end{bmatrix}$	$\begin{bmatrix} -19 \\ -49 \end{bmatrix}$
ansv			_	$\begin{bmatrix} -36 \\ -90 \end{bmatrix}$
ansv	ver6		_	38 0
ansv	ver7		_	$\begin{bmatrix} -50 \\ 10 \end{bmatrix}$
ansv	ver8		_	153 -117]
			48	$\begin{bmatrix} 54 \\ -42 \end{bmatrix}$

answer9 
$$\begin{bmatrix} 20 & -20 \\ -87 & 10 \end{bmatrix}$$

answer10 
$$\begin{bmatrix} -75 & -67 \\ -35 & -35 \end{bmatrix}$$

answer12 
$$\begin{bmatrix} 15 & -3 \\ 15 & 51 \end{bmatrix}$$

answer13 
$$\begin{bmatrix} 16 & 26 \\ 3 & -24 \end{bmatrix}$$

answer14 
$$\begin{bmatrix} -35 & 30 \\ 46 & -33 \end{bmatrix}$$

answer15 
$$\begin{bmatrix} 32 & 4 \\ -66 & -82 \end{bmatrix}$$

answer16 
$$\begin{bmatrix} -20 & 84 \\ -93 & -5 \end{bmatrix}$$

answer17 
$$\begin{bmatrix} 5 & 1 \\ 66 & 21 \end{bmatrix}$$

answer18 
$$\begin{bmatrix} -19 & 33 \\ -3 & 1 \end{bmatrix}$$

$$\begin{bmatrix} 54 & 57 \\ 45 & 14 \end{bmatrix}$$

answer20 
$$\begin{bmatrix} 5 & -6 \\ 41 & -34 \end{bmatrix}$$

answer**21**

$$\begin{bmatrix}
-76 & 103 \\
-76 & 108
\end{bmatrix}$$

$$\begin{bmatrix} 18 & 10 \\ -18 & -10 \end{bmatrix}$$

answer23	$\begin{bmatrix} -33 & 28 \\ -54 & 24 \end{bmatrix}$
answer24	$\begin{bmatrix} -32 & 2 \\ -26 & 26 \end{bmatrix}$
answer25	$\begin{bmatrix} -37 & 52 \\ 1 & 64 \end{bmatrix}$
answer26	$\begin{bmatrix} 48 & -4 \\ -16 & -2 \end{bmatrix}$
answer27	$\begin{bmatrix} 88 & -12 \\ -66 & 24 \end{bmatrix}$
answer28	$\begin{bmatrix} 2 & 23 \\ 2 & 23 \end{bmatrix}$
answer29	$\begin{bmatrix} -25 & 8 \\ -50 & -23 \end{bmatrix}$
answer30	$\begin{bmatrix} 115 & 135 \\ -115 & -144 \end{bmatrix}$
answer31	$\begin{bmatrix} -51 & -24 \\ 85 & 30 \end{bmatrix}$
answer32	$\begin{bmatrix} -4 & 10 \\ 16 & 64 \end{bmatrix}$
answer33	$\begin{bmatrix} 33 & 36 \\ 58 & 75 \end{bmatrix}$
answer34	$\begin{bmatrix} 0 & 63 \\ -37 & 62 \end{bmatrix}$
answer35	$\begin{bmatrix} -22 & 12 \\ 52 & -2 \end{bmatrix}$
answer36	$\begin{bmatrix} 76 & -46 \\ -24 & 9 \end{bmatrix}$
	[-24 9]

$$\begin{bmatrix} 9 & -2 \\ -77 & 77 \end{bmatrix}$$

$$\begin{bmatrix} -57 & 56 \\ 75 & -65 \end{bmatrix}$$

#### answer39

$$\begin{bmatrix} 50 & 35 \\ 36 & 30 \end{bmatrix}$$

answer40

$$\begin{bmatrix} -14 & -52 \\ 42 & 16 \end{bmatrix}$$

answer41

$$\begin{bmatrix} -56 & 40 \\ 24 & -3 \end{bmatrix}$$

answer42

$$\begin{bmatrix} 54 & 12 \\ 9 & -14 \end{bmatrix}$$

answer43

$$\begin{bmatrix} 82 & 9 \\ 4 & 3 \end{bmatrix}$$

answer44

$$\begin{bmatrix} -48 & 30 \\ -62 & -5 \end{bmatrix}$$

 ${\bf answer 45}$ 

$$\begin{bmatrix} -81 & -78 \\ 27 & -3 \end{bmatrix}$$

 ${\bf answer 46}$ 

$$\begin{bmatrix} 24 & 40 \\ -18 & -30 \end{bmatrix}$$

 ${\bf answer 47}$ 

$$\begin{bmatrix} -46 & -30 \\ 0 & 0 \end{bmatrix}$$

answer48

$$\begin{bmatrix} 4 & 6 \\ 0 & -70 \end{bmatrix}$$

 ${\bf answer 49}$ 

$$\begin{bmatrix} 42 & -84 \\ -80 & 44 \end{bmatrix}$$

$$\begin{bmatrix} 34 & -29 \\ 59 & -31 \end{bmatrix}$$

$$\begin{bmatrix} 15 & -52 & 12 \\ -3 & 94 & -44 \\ -24 & 49 & 26 \end{bmatrix}$$

$$\begin{bmatrix} 39 & 46 & -2 \\ -5 & -47 & -107 \\ -5 & 4 & -38 \end{bmatrix}$$

#### answer53

$$\begin{bmatrix} -71 & -60 & -16 \\ 48 & 49 & 9 \\ -47 & 82 & -18 \end{bmatrix}$$

#### answer54

$$\begin{bmatrix} 0 & 22 & -17 \\ -14 & -34 & 103 \\ -15 & 7 & 9 \end{bmatrix}$$

### ${\bf answer 55}$

$$\begin{bmatrix} 36 & 50 & -8 \\ 23 & -62 & 58 \\ -33 & 25 & 34 \end{bmatrix}$$

#### answer56

$$\begin{bmatrix} 0 & 54 & -45 \\ -24 & -96 & -50 \\ -19 & 29 & -32 \end{bmatrix}$$

### answer57

$$\begin{bmatrix} -15 & -5 & -65 \\ 26 & -10 & 74 \\ -3 & -5 & -41 \end{bmatrix}$$

#### answer58

$$\begin{bmatrix} -4 & 3 & 50 \\ 62 & 66 & 15 \\ -20 & 9 & 87 \end{bmatrix}$$

#### answer59

$$\begin{bmatrix} -21 & -63 & 46 \\ 11 & -76 & 145 \\ 14 & 20 & -46 \end{bmatrix}$$

#### answer60

$$\begin{bmatrix} 23 & 34 & 24 \\ -41 & 126 & 80 \\ -47 & 66 & 48 \end{bmatrix}$$

$$\begin{bmatrix} -6 & 32 & 72 \\ -79 & 36 & -23 \\ 67 & -33 & -19 \end{bmatrix}$$

$$\begin{bmatrix} -45 & -33 & 57 \\ 79 & -34 & -51 \\ -60 & 28 & -2 \end{bmatrix}$$

$$\begin{bmatrix} 42 & -86 & 84 \\ -60 & -126 & 36 \\ -16 & -55 & 3 \end{bmatrix}$$

#### answer64

$$\begin{bmatrix} 33 & -24 & 67 \\ -63 & -70 & 45 \\ -15 & -78 & 117 \end{bmatrix}$$

#### answer65

$$\begin{bmatrix} 32 & -61 & 53 \\ 86 & -43 & 12 \\ 22 & 17 & -51 \end{bmatrix}$$

### answer66

$$\begin{bmatrix} 36 & 30 & 90 \\ 46 & -50 & 47 \\ 16 & -95 & -52 \end{bmatrix}$$

#### answer67

$$\begin{bmatrix} -94 & -27 & 7 \\ -4 & -36 & 16 \\ -59 & -144 & -61 \end{bmatrix}$$

### answer68

$$\begin{bmatrix} 2 & -6 & 44 \\ 116 & -96 & 92 \\ 36 & 81 & 72 \end{bmatrix}$$

#### answer69

$$\begin{bmatrix} -44 & 11 & -33 \\ -58 & -26 & -2 \\ -11 & -16 & 8 \end{bmatrix}$$

#### answer70

$$\begin{bmatrix} -25 & 10 & 29 \\ -6 & -15 & -14 \\ 36 & 0 & -132 \end{bmatrix}$$

#### answer71

$$\begin{bmatrix} 76 & 95 & 56 \\ 87 & 63 & 46 \\ -54 & 11 & -8 \end{bmatrix}$$

$$\begin{bmatrix} 9 & -15 & -20 \\ 85 & -68 & 14 \\ 135 & 0 & 148 \end{bmatrix}$$

$$\begin{bmatrix} -22 & 96 & 8 \\ 7 & -56 & -3 \\ -8 & 30 & -6 \end{bmatrix}$$

$$\begin{bmatrix} -3 & -65 & 5\\ 20 & 11 & -145\\ -4 & -101 & -9 \end{bmatrix}$$

### answer75

$$\begin{bmatrix} 14 & 58 & -26 \\ -115 & -77 & 61 \\ -64 & -94 & 39 \end{bmatrix}$$

#### answer76

$$\begin{bmatrix} -9 & -10 & -32 \\ 27 & 91 & -11 \\ 36 & 98 & -9 \end{bmatrix}$$

### answer77

$$\begin{bmatrix} -49 & -3 & 46 \\ 63 & -75 & -51 \\ -97 & 1 & 93 \end{bmatrix}$$

#### answer78

$$\begin{bmatrix} 51 & -70 & 51 \\ -36 & 56 & -36 \\ 4 & -11 & 24 \end{bmatrix}$$

#### answer79

$$\begin{bmatrix} -101 & 38 & 31 \\ -18 & -9 & -44 \\ 15 & -15 & -25 \end{bmatrix}$$

#### answer80

$$\begin{bmatrix} 51 & 30 & 35 \\ -16 & -109 & 54 \\ 36 & -34 & 28 \end{bmatrix}$$

#### answer81

$$\begin{bmatrix} 68 & 0 & 9 \\ -42 & 40 & -85 \\ 19 & -80 & -31 \end{bmatrix}$$

#### answer82

$$\begin{bmatrix} -50 & -89 & 26 \\ -117 & -154 & 56 \\ -116 & -162 & 52 \end{bmatrix}$$

$$\begin{bmatrix} -18 & -20 & 12 \\ 15 & 30 & 18 \\ 8 & 7 & -5 \end{bmatrix}$$

$$\begin{bmatrix} -44 & 34 & 42 \\ 110 & -112 & 78 \\ 107 & -106 & 57 \end{bmatrix}$$

$$\begin{bmatrix} -106 & 111 & 53 \\ 18 & -38 & -6 \\ -12 & -8 & -8 \end{bmatrix}$$

#### answer86

$$\begin{bmatrix} -45 & -54 & 29 \\ 60 & 126 & 73 \\ -17 & -86 & -126 \end{bmatrix}$$

### answer87

$$\begin{bmatrix} -54 & 24 & 0 \\ -18 & 8 & 0 \\ -48 & -112 & -100 \end{bmatrix}$$

#### answer88

$$\begin{bmatrix} -81 & 8 & -20 \\ 179 & -14 & 47 \\ 107 & -9 & 23 \end{bmatrix}$$

#### answer89

$$\begin{bmatrix} -46 & -168 & -12 \\ 34 & 69 & 57 \\ 104 & 10 & -30 \end{bmatrix}$$

#### answer90

$$\begin{bmatrix} -48 & -45 & -34 \\ -97 & -9 & 15 \\ 98 & 33 & 8 \end{bmatrix}$$

#### answer91

$$\begin{bmatrix} -21 & -40 & -25 \\ 13 & -75 & 90 \\ -46 & -85 & 35 \end{bmatrix}$$

#### answer92

$$\begin{bmatrix} -86 & -54 & -93 \\ 12 & -42 & -31 \\ 55 & 42 & 60 \end{bmatrix}$$

#### answer93

$$\begin{bmatrix} -21 & -133 & 14 \\ 23 & 73 & 32 \\ -35 & -5 & 66 \end{bmatrix}$$

$$\begin{bmatrix} -36 & 18 & -60 \\ -4 & 102 & 44 \\ 67 & 49 & 13 \end{bmatrix}$$

$$\begin{bmatrix} -139 & -80 & 115 \\ -85 & -21 & 36 \\ 83 & 17 & -35 \end{bmatrix}$$

$$\begin{bmatrix} -16 & 54 & -62 \\ -34 & 13 & 31 \\ 30 & 13 & 135 \end{bmatrix}$$

### answer97

$$\begin{bmatrix} -40 & 70 & 48 \\ -4 & 16 & 0 \\ 72 & -98 & -40 \end{bmatrix}$$

#### answer98

$$\begin{bmatrix} -24 & 66 & -12 \\ -18 & 95 & -35 \\ 34 & 16 & 48 \end{bmatrix}$$

### answer99

$$\begin{bmatrix} 11 & 29 & 98 \\ 33 & 81 & 127 \\ 34 & 35 & -25 \end{bmatrix}$$

#### answer100

$$\begin{bmatrix} -97 & -86 & 39 \\ -97 & -79 & 25 \\ 16 & 40 & 1 \end{bmatrix}$$

#### answer101

$$\begin{bmatrix} 66 & 6 & -26 & -14 \\ -52 & -91 & 82 & 97 \\ -105 & -99 & 110 & 116 \\ -18 & 82 & -42 & -78 \end{bmatrix}$$

### ${\bf answer 102}$

$$\begin{bmatrix} 72 & -59 & 69 & 37 \\ -88 & 8 & -91 & 28 \\ -43 & -6 & -13 & 38 \\ -88 & -78 & -49 & 152 \end{bmatrix}$$

### answer103

$$\begin{bmatrix} 8 & -59 & 4 & -2 \\ 8 & -75 & -32 & -4 \\ -9 & -76 & -48 & 38 \\ 60 & -42 & -8 & -100 \end{bmatrix}$$

$$\begin{bmatrix} 20 & 35 & -35 & 6 \\ -67 & -64 & 54 & -45 \\ 82 & 35 & -82 & 9 \\ 56 & -7 & 73 & 90 \end{bmatrix}$$

$$\begin{bmatrix} -2 & -118 & -34 & 133 \\ -108 & 14 & 36 & -23 \\ -140 & 14 & -34 & -100 \\ -53 & -22 & -10 & 4 \end{bmatrix}$$

$$\begin{bmatrix} -47 & -30 & -31 & -10 \\ -33 & 31 & -94 & -54 \\ 93 & 64 & 80 & 66 \\ 50 & 107 & -25 & 76 \end{bmatrix}$$

#### answer107

$$\begin{bmatrix} -17 & -3 & 1 & 67 \\ -90 & -58 & 11 & 72 \\ 87 & 31 & -18 & -17 \\ -79 & -6 & 16 & 159 \end{bmatrix}$$

#### answer108

$$\begin{bmatrix} -10 & 7 & 20 & 149 \\ 74 & 23 & 70 & -78 \\ -27 & 59 & -10 & 111 \\ 46 & -103 & 58 & 32 \end{bmatrix}$$

#### answer109

$$\begin{bmatrix} -63 & -65 & -50 & -57 \\ 133 & -13 & 110 & -35 \\ 1 & -75 & 35 & -9 \\ 65 & 62 & 182 & 89 \end{bmatrix}$$

#### answer110

$$\begin{bmatrix} 101 & -74 & -34 & 7 \\ 17 & -11 & -96 & 31 \\ -145 & 93 & -57 & 134 \\ -128 & 79 & 49 & -8 \end{bmatrix}$$

#### answer111

$$\begin{bmatrix} -81 & -2 & 125 & 1\\ 21 & 63 & 38 & 45\\ 16 & -89 & -155 & -58\\ 81 & 0 & -69 & -29 \end{bmatrix}$$

#### answer112

$$\begin{bmatrix} -112 & -64 & -30 & -56 \\ -34 & -21 & 25 & -27 \\ 15 & 46 & 8 & -117 \\ -41 & -37 & -192 & 48 \end{bmatrix}$$

$$\begin{bmatrix} -47 & 88 & -114 & 168 \\ 91 & 19 & -99 & 72 \\ 20 & 49 & -63 & 124 \\ -106 & -195 & 37 & -150 \end{bmatrix}$$

$$\begin{bmatrix} -20 & -29 & -20 & -31 \\ 60 & 23 & 43 & -42 \\ 62 & -27 & -3 & 10 \\ 22 & 15 & 31 & -84 \end{bmatrix}$$

$$\begin{bmatrix} -8 & 21 & 1 & 19 \\ -21 & -24 & -35 & -48 \\ -100 & -4 & -32 & 4 \\ 76 & -21 & 5 & -29 \end{bmatrix}$$

#### answer116

$$\begin{bmatrix} -114 & -19 & 88 & 1 \\ -16 & 30 & 26 & 2 \\ 50 & -8 & 96 & -59 \\ -62 & 77 & -8 & -49 \end{bmatrix}$$

#### answer117

$$\begin{bmatrix} 8 & 23 & -105 & -9 \\ 93 & -20 & 51 & 164 \\ -20 & 73 & -74 & -12 \\ 48 & 41 & 34 & 148 \end{bmatrix}$$

#### answer118

$$\begin{bmatrix} -42 & 21 & -51 & 66 \\ -29 & 10 & -94 & -26 \\ -46 & 55 & -40 & 16 \\ 77 & 89 & 105 & -58 \end{bmatrix}$$

#### answer119

$$\begin{bmatrix} 18 & -51 & -62 & -74 \\ 91 & -12 & 2 & -36 \\ 19 & -91 & -27 & -17 \\ 53 & 109 & 73 & -9 \end{bmatrix}$$

#### answer120

$$\begin{bmatrix} 45 & -38 & 50 & -86 \\ -42 & 62 & -109 & 16 \\ 82 & -48 & 73 & 115 \\ 57 & -55 & 115 & -16 \end{bmatrix}$$

#### answer121

$$\begin{bmatrix} 42 & 32 & 40 & -72 \\ 25 & 35 & -17 & 37 \\ 44 & 30 & 120 & -68 \\ 23 & 38 & -14 & 43 \end{bmatrix}$$

$$\begin{bmatrix} 42 & -9 & 48 & 27 \\ -87 & -3 & -91 & -75 \\ 8 & 58 & 53 & 61 \\ 26 & 37 & 40 & 61 \end{bmatrix}$$

$$\begin{bmatrix} 80 & -26 & 64 & 56 \\ 62 & 9 & 34 & -60 \\ -42 & -49 & -18 & 88 \\ -79 & -12 & 13 & 39 \end{bmatrix}$$

$$\begin{bmatrix} 3 & 70 & -18 & 16 \\ 29 & -11 & 113 & -37 \\ 28 & -31 & 78 & -20 \\ -25 & -58 & -136 & 33 \end{bmatrix}$$

#### answer125

$$\begin{bmatrix} -1 & -34 & 59 & -54 \\ 26 & 18 & -1 & 4 \\ 93 & 59 & -75 & -34 \\ 153 & 123 & -103 & -22 \end{bmatrix}$$

#### answer126

$$\begin{bmatrix} -98 & -15 & 30 & 94 \\ 8 & -56 & 101 & 25 \\ 90 & 36 & 20 & -51 \\ -90 & -50 & -26 & 95 \end{bmatrix}$$

#### answer127

$$\begin{bmatrix} 4 & 2 & 13 & -17 \\ -33 & -35 & -20 & 19 \\ 24 & -4 & 5 & 17 \\ 26 & -41 & 47 & -73 \end{bmatrix}$$

### answer128

$$\begin{bmatrix} 27 & -146 & -14 & 22 \\ -85 & -106 & -87 & -11 \\ 38 & -57 & -1 & 48 \\ 55 & 41 & 18 & -105 \end{bmatrix}$$

#### answer129

$$\begin{bmatrix} 20 & -110 & 104 & 54 \\ -46 & 95 & -34 & 57 \\ 123 & 71 & -40 & 42 \\ 205 & -5 & 20 & 40 \end{bmatrix}$$

#### answer130

$$\begin{bmatrix} 70 & -23 & 84 & 5 \\ -43 & 62 & -2 & 57 \\ -29 & 28 & -46 & 45 \\ 15 & -3 & -102 & 96 \end{bmatrix}$$

$$\begin{bmatrix} 43 & -3 & -36 & -59 \\ -97 & 51 & 45 & -14 \\ -2 & 33 & -12 & -14 \\ 34 & 0 & -30 & -104 \end{bmatrix}$$

$$\begin{bmatrix} 73 & 67 & 10 & -213 \\ 75 & 35 & 35 & 35 \\ -59 & 7 & 80 & 95 \\ -94 & 6 & 2 & -26 \end{bmatrix}$$

$$\begin{bmatrix} 51 & -111 & -141 & -64 \\ 22 & -109 & -48 & 36 \\ 73 & -104 & -57 & -37 \\ -8 & -62 & -108 & -28 \end{bmatrix}$$

#### answer134

$$\begin{bmatrix} 36 & 51 & -20 & 33 \\ 129 & -75 & -98 & 69 \\ -127 & 44 & 41 & 12 \\ 63 & 16 & 41 & 78 \end{bmatrix}$$

#### answer135

$$\begin{bmatrix} -124 & 19 & -58 & 85 \\ -123 & 102 & 60 & 35 \\ 74 & -7 & 30 & -23 \\ -71 & 16 & -14 & 13 \end{bmatrix}$$

#### answer136

$$\begin{bmatrix} -45 & -7 & 59 & 19 \\ 52 & 12 & 49 & 44 \\ -29 & -37 & 9 & 34 \\ 91 & 23 & 117 & 92 \end{bmatrix}$$

#### answer137

$$\begin{bmatrix} -26 & -8 & -30 & -45 \\ 6 & 48 & 44 & 63 \\ -64 & 71 & 12 & -108 \\ 71 & -52 & 36 & -57 \end{bmatrix}$$

#### answer138

$$\begin{bmatrix} 4 & -38 & 50 & -40 \\ -20 & 20 & -83 & -8 \\ 26 & 33 & -100 & 55 \\ 23 & -72 & -74 & 8 \end{bmatrix}$$

#### answer139

$$\begin{bmatrix} 98 & 89 & -45 & 105 \\ 65 & -55 & -5 & 31 \\ -18 & -47 & -22 & -5 \\ -78 & -10 & 46 & -82 \end{bmatrix}$$

$$\begin{bmatrix} 95 & -61 & -6 & -9 \\ 66 & -72 & 136 & 98 \\ 99 & -53 & 30 & -30 \\ 42 & -20 & -84 & -18 \end{bmatrix}$$

$$\begin{bmatrix} 36 & -64 & -2 & 2 \\ 39 & 81 & 225 & 5 \\ 120 & -12 & 108 & 79 \\ 27 & 23 & -11 & 104 \end{bmatrix}$$

$$\begin{bmatrix} 78 & 30 & 129 & 96 \\ -52 & -11 & 97 & 74 \\ 28 & -16 & -70 & -53 \\ -52 & -28 & -24 & -67 \end{bmatrix}$$

#### answer143

$$\begin{bmatrix} 50 & 33 & -133 & 30 \\ -40 & -112 & 22 & 63 \\ -58 & -4 & -10 & 32 \\ -24 & 13 & 115 & -29 \end{bmatrix}$$

#### answer144

$$\begin{bmatrix} 26 & 14 & -24 & 73 \\ 46 & 172 & -76 & -68 \\ -62 & -92 & 82 & -4 \\ 63 & 171 & -81 & -18 \end{bmatrix}$$

#### answer145

$$\begin{bmatrix} -60 & -42 & -8 & 53 \\ 8 & -87 & 13 & -86 \\ 42 & 174 & -28 & 136 \\ -9 & -26 & 25 & -27 \end{bmatrix}$$

#### answer146

$$\begin{bmatrix} 8 & -24 & 76 & 12 \\ -18 & 81 & -139 & -57 \\ 27 & -80 & 125 & 51 \\ -2 & 3 & 61 & 14 \end{bmatrix}$$

#### answer147

$$\begin{bmatrix} -4 & -13 & 10 & -1 \\ -39 & 24 & -2 & -25 \\ -136 & 58 & -50 & -54 \\ -10 & -69 & -95 & 87 \end{bmatrix}$$

#### answer148

$$\begin{bmatrix} -69 & -15 & -37 & 29 \\ 4 & 67 & 50 & -47 \\ 17 & 76 & 53 & -23 \\ -24 & 65 & 127 & -47 \end{bmatrix}$$

$$\begin{bmatrix} -17 & -66 & 55 & 96 \\ -34 & 29 & 13 & 15 \\ -14 & -51 & 49 & 49 \\ 33 & -33 & -20 & 13 \end{bmatrix}$$

$$\begin{bmatrix} -60 & 21 & 133 & 47 \\ -84 & 2 & 102 & 19 \\ -125 & -34 & 108 & -13 \\ 50 & 21 & -53 & 11 \end{bmatrix}$$

# 2 Matrix Inverse

answer1	[-0.200000	0.320000]
	$\begin{bmatrix} -0.200000 \\ 0.000000 \end{bmatrix}$	0.200000
answer2	0.285714	0.428571
	$\begin{bmatrix} 0.285714 \\ -0.500000 \end{bmatrix}$	-0.500000
answer3	$\begin{bmatrix} -0.285714 \\ -0.142857 \end{bmatrix}$	0.238095
	[-0.142857]	-0.047619
answer4	1.000000 1.000000	0.857143
_	[1.000000	0.714286
answer5	$\begin{bmatrix} 0.022727 \\ 0.136364 \end{bmatrix}$	0.159091
0	[0.136364	-0.045455
answer6	$\begin{bmatrix} -0.125000 \\ 0.083333 \end{bmatrix}$	-0.250000
7	[ 0.083333	-0.166667
answer7	$\begin{bmatrix} 0.307692 \\ -0.192308 \end{bmatrix}$	0.384615
0	[-0.192308]	-0.115385
answer8	$\begin{bmatrix} 0.052632 \\ -0.210526 \end{bmatrix}$	0.263158
0	[-0.210526]	-0.052632
answer9	$\begin{bmatrix} -0.000000 \\ -1.000000 \end{bmatrix}$	-0.250000
10	[-1.000000	0.500000
answer10	$\begin{bmatrix} -0.192308 \\ -0.038462 \end{bmatrix}$	-0.230769
	[-0.038462]	0.153846
answer11	$\begin{bmatrix} -0.230769 \\ 0.076923 \end{bmatrix}$	-0.128205
10	0.076923	0.153846
answer12	0.100000	$\begin{bmatrix} -0.500000 \\ -0.500000 \end{bmatrix}$
	[-0.100000	-0.500000

answer13		
answer15	$\begin{bmatrix} 0.428571 \\ 0.333333 \end{bmatrix}$	$\begin{bmatrix} 0.285714 \\ 0.333333 \end{bmatrix}$
answer14	$\begin{bmatrix} -0.500000 \\ 0.000000 \end{bmatrix}$	$0.357143 \\ 0.142857 \end{bmatrix}$
answer15	$\begin{bmatrix} -1.333333 \\ -1.666667 \end{bmatrix}$	$\begin{bmatrix} -1.000000 \\ -1.000000 \end{bmatrix}$
answer16	$\begin{bmatrix} -0.157895 \\ -0.210526 \end{bmatrix}$	0.368421 $0.157895$
answer17	$\begin{bmatrix} -2.333333 \\ 0.666667 \end{bmatrix}$	_
answer18	$\begin{bmatrix} 0.083333 \\ -0.075000 \end{bmatrix}$	
answer19	$\begin{bmatrix} -0.100000 \\ 0.166667 \end{bmatrix}$	-
answer20	$\begin{bmatrix} -0.045455 \\ -0.136364 \end{bmatrix}$	-
answer21	$\begin{bmatrix} 0.500000 \\ -0.750000 \end{bmatrix}$	
answer22	$\begin{bmatrix} -0.033333 \\ 0.133333 \end{bmatrix}$	_
answer23	$\begin{bmatrix} -0.111111 \\ 0.129630 \end{bmatrix}$	_
answer24	_	0.190476
answer25	$\begin{bmatrix} 0.500000 \\ 1.000000 \end{bmatrix}$	$   \begin{bmatrix}     0.250000 \\     0.000000   \end{bmatrix} $
answer26	$\begin{bmatrix} -0.333333 \\ 0.666667 \end{bmatrix}$	_

answer27	$\begin{bmatrix} -0.272727 \\ -0.181818 \end{bmatrix}$	$\begin{bmatrix} -0.151515 \\ -0.212121 \end{bmatrix}$
answer28	$\begin{bmatrix} -0.333333 \\ 0.583333 \end{bmatrix}$	_
answer29	$\begin{bmatrix} 0.583333 \\ 0.250000 \\ -0.750000 \end{bmatrix}$	
answer30	_	_
answer31	$\begin{bmatrix} -0.116279 \\ -0.209302 \end{bmatrix}$	_
answer32	$\begin{bmatrix} 0.086207 \\ -0.103448 \end{bmatrix}$	_
	$\begin{bmatrix} -0.051852 \\ -0.066667 \end{bmatrix}$	$\begin{bmatrix} -0.059259 \\ 0.066667 \end{bmatrix}$
answer33	$\begin{bmatrix} -0.625000 \\ -1.000000 \end{bmatrix}$	$\begin{bmatrix} -0.125000 \\ -0.000000 \end{bmatrix}$
answer34	$\begin{bmatrix} -0.041667 \\ -0.208333 \end{bmatrix}$	$\begin{bmatrix} 0.125000 \\ -0.375000 \end{bmatrix}$
answer35	$\begin{bmatrix} 0.059322 \\ -0.076271 \end{bmatrix}$	
answer36	$\begin{bmatrix} -0.200000 \\ -0.200000 \end{bmatrix}$	
answer37	$\begin{bmatrix} -0.200000 \\ 0.166667 \\ -0.500000 \end{bmatrix}$	_
answer38	$\begin{bmatrix} -0.500000 \\ -0.100000 \end{bmatrix}$	_
answer39	0.000000	0.125000
answer40	$\begin{bmatrix} 0.200000 \\ 0.200000 \end{bmatrix}$	$0.400000 \ 0.066667$
answei 40	$\begin{bmatrix} 0.058824 \\ -0.176471 \end{bmatrix}$	$\begin{bmatrix} -0.176471 \\ -0.470588 \end{bmatrix}$

```
answer41
                            -0.142857 \quad -0.000000
                                        0.125000
                           0.053571
answer42
                            0.142857
                                       -0.257143
                           -0.142857
                                        0.057143
answer43
                            0.107143
                                       -0.178571
                           -0.142857
                                        0.071429
answer44
                            -0.111111
                                        0.111111
                                        0.088889
                            0.111111
answer45
                           [-0.000000]
                                       -0.500000
                           -0.333333
                                       0.833333
answer46
                            [0.692308 \quad 0.384615]
                                       0.230769
                            0.615385
answer47
                            -0.125000 \quad -0.140625
                            0.000000
                                        0.125000
answer48
                            -1.500000 \quad -1.000000
                           -0.833333 -0.666667
answer49
                            -0.090909
                                        0.181818
                            -0.818182 \quad 0.636364
answer50
                           \begin{bmatrix} -4.000000 & -3.000000 \end{bmatrix}
                          \begin{bmatrix} -0.500000 & -0.500000 \end{bmatrix}
answer51
                                            -0.042857
                      0.114286
                                  0.057143
                      0.066667
                                  0.116667
                                             0.058333
                      -0.019048
                                 0.073810
                                            -0.034524
answer52
                     0.172638
                                            -0.029316
                                 -0.156352
                     -0.133550
                                 -0.048860
                                            -0.071661
                     -0.123779
                                  0.149837
                                              0.153094
answer53
                     3.000000
                                  -1.000000
                                              -3.000000
                     -11.750000
                                  4.250000
                                              12.000000
                     -27.250000
                                  9.750000
                                              28.000000
```

answer54	[-0.276000]	0.072000	0.128000 7
	0.512000	-0.264000	-0.136000
	0.312000	-0.204000 $-0.152000$	-0.130000 $-0.048000$
	0.410000	0.152000	0.040000]
answer55	Fo. 000910	0.000000	0.099409]
	0.026316	-0.098086	$ \begin{array}{c c} -0.033493 \\ -0.043062 \end{array} $
	0.105263	0.016746	
	0.078947	0.023923	0.081340
answer56	_		-
	-0.035573	0.055336	-0.098814
	0.051383	0.142292	0.031621
	[-0.083004]	-0.037549	0.102767
answer57			
	[-0.083333]	-0.000000	-0.066667
	0.312500	-0.250000	-0.200000
	0.312500 0.145833	-0.250000	-0.133333
answer58	_		_
aliswei 56	「 0.036765	0.147059	0.227941
	-0.242647	0.029412	0.095588
	$\begin{bmatrix} -0.242647 \\ -0.007353 \end{bmatrix}$	-0.029412	0.154412
	L 0.00.000	0.020112	0.101112
answer59	L 0.003308	-0.169231	0.361538 7
	$\begin{bmatrix} -0.092308 \\ 0.123077 \end{bmatrix}$	-0.109231 $-0.107692$	ı
	-0.125077 -0.107692	00.00-	0.184615
	[-0.107092	-0.030769	-0.161538
answer60	Г		
	0.073260	-0.049451	-0.009158
	0.009158	-0.068681	0.061355
	[-0.135531	0.016484	-0.108059
answer61			
	0.122581	0.148387	-0.103226
	-0.458065	-0.238710	0.122581
	[-0.238710]	-0.025806	0.148387
answer62			
	[-0.200000	-0.200000	0.300000
	0.047059	-0.129412	-0.041176
	0.117647	0.176471	-0.352941
answer63	_		_
allsweros	[-0.135266]	0.217391	0.193237
	-0.130435	$0.217391 \\ 0.173913$	0.043478
	-0.101449	-0.086957	0.144928
0.4	L :		]
answer64	Γ 0 139931	-0.196281	-0.105372
	_0.132231	0.210744	0.028926
	-0.173334 -0.181818	0.210744 $0.113636$	$0.028920 \\ 0.113636$
	L 0.101010	0.110000	0.110000 ]

answer65			
	[-0.042831]	0.156425	0.124767
	-0.035382	-0.044693	0.059590
	-0.154562	0.173184	0.102421
	L 0.120.200	0.2,020	ssJ
answer66	Γ 0.155005	0.204727	0.054206]
	-0.157895	-0.394737	-0.254386
	0.157895	0.894737	0.754386
	0.105263	0.263158	0.280702
answer67			
	[-0.103448]	-0.172414	0.241379
	-0.034483	0.175862	-0.186207
	0.034483	0.124138	-0.013793
	L 3133	312223	2.2-2.22
answer68	Γο 490571	0.000000	0.149057
	0.428571	0.000000	-0.142857
	-0.553571	0.125000	0.017857
	[-0.285714]	-0.000000	-0.071429
answer69			
	0.019481	0.558442	-0.194805
	0.097403	-0.207792	0.025974
	-0.103896	-0.311688	0.038961
	L		
answer70	Γορεμοντ	0.071490	0.005074.7
	0.064935	-0.071429	0.025974
	0	0.035714	-0.240260
	-0.142857	-0.142857	0.142857
answer71			
	[-0.363636]	0.028409	-0.164773
	0.090909	-0.147727	0.056818
	-0.272727	0.005682	-0.232955
<b>=</b> 0	L		_
answer72	0.033654	-0.146635	-0.028846
	1		
	-0.134615	0.086538	0.115385
	[-0.043269]	0.045673	-0.105769
answer73			
	0.066667	-0.053333	0.013333
	0.097778	0.028444	0.059556
	-0.026667	-0.098667	0.074667
<b>-</b> 4	L		_
answer74	Γ ∩ ∩23121	-0.090559	0.059730
	$\begin{vmatrix} 0.023121 \\ 0.075145 \end{vmatrix}$	-0.090339 $-0.044316$	-0.055877
	-0.063584	-0.167630	-0.080925
answer75	_		
	[-0.052805]	-0.112211	0.207921
	-0.075908	-0.036304	-0.138614
	-0.049505	0.019802	0.257426
	_		_

answer76			
answerro	[-0.144144]	0.081081	-0.090090
	-0.189189	-0.081081	-0.243243
	0.441441	0.189189	0.900901
answer77	_		_
answer	[-0.331551]	-0.122995	-0.320856
	0.358289	0.278075	0.508021
	$\begin{bmatrix} -0.171123 \end{bmatrix}$	-0.192513	-0.197861
	L 0.11,1120	0.102010	0.10,001]
answer78	Γο 197007	-0.007752	-0.031008
	$\begin{bmatrix} 0.127907 \\ 0.120525 \end{bmatrix}$	-0.007752 $0.127907$	0.011628
	$\begin{bmatrix} 0.121301 \\ 0.139535 \\ -0.116279 \end{bmatrix}$	-0.023256	
	[-0.110279	-0.023230	-0.093023
answer79	F		
	-0.014634	-0.078049	-0.029268
	-0.048780	0.073171	-0.097561
	0.082927	0.025610	-0.084146
answer80			
	0.243478	-0.060870	-0.043478
	-0.173913	0.043478	0.173913
	-0.317391	0.204348	0.217391
answer81	_		_
answeror	[-0.333333]	-1.166667	-0.500000
	-0.666667	-2.666667	-1.000000
	-0.666667	-2.250000	-0.750000
0.0	L 3133333		
answer82	[0.069767	-0.162791	0.116279 ]
	0.003707	0.102731	-0.186047
	$\begin{bmatrix} 0.238372 \\ 0.127907 \end{bmatrix}$	0.110405	0.046512
	[0.127507	0.034004	0.040012
answer83	F 0.070047	0.079004	0.700910.7
	-0.978947	-0.673684	0.726316
	0.578947	0.473684	-0.526316
	0.242105	0.252632	-0.147368
answer84	_		-
	0.250000	0.000000	-0.250000
	0.237500	-0.250000	-0.037500
	[-0.018750]	0.125000	-0.181250
answer85			
	1.000000	-1.416667	0.916667
	-0.000000	0.166667	-0.166667
	-0.500000	0.833333	-0.333333
answer86	_		_
answered	[-0.070234]	-0.073579	0.030100 ]
	-0.083612	0.150502	-0.107023
	-0.066890	0.120401	-0.185619
	_		]

answer87	_		_
	0.170732	-0.024390	-0.121951
	0.512195	0.260163	-0.032520
	-0.463415	-0.219512	-0.097561
anguran00	_		_
answer88	[-0.011152]	-0.267658	0.416357
	0.048327	0.159851	-0.137546
	0.089219	0.141264	-0.330855
	L 0.000 <b>2</b> 10	0.111201	0.000000]
answer89	Γοοσσο	0.006057	0.022600 ]
	0.076087	-0.086957	0.032609
	-0.097826 $0.021739$	-0.173913	-0.184783
	0.021739	0.010870	0.152174
answer90	_		_
	0.056338	0.140845	0.173709
	$\begin{bmatrix} -0.049296 \\ -0.084507 \end{bmatrix}$	0.126761	0.056338
	-0.084507	-0.211268	-0.093897
answer91	_		_
answerst	[1.000000	0.000000	-0.0000000
	1.250000	0.125000	-0.000000
	1.291667	0.062500	0.166667
0.0	L	0.00_00	3.23333. ]
answer92	Γ 0.645455	0.518182	0.727273 ]
	-0.645455	-0.127273	
	0.018182		-0.090909
	0.800000	-0.600000	-1.000000
answer93	_		_
	-0.100000	0.050000	-0.050000
	$\begin{bmatrix} -0.100000 \\ -0.050000 \\ -0.094444 \end{bmatrix}$	0.150000	0.100000
	[-0.094444]	0.005556	0.022222
answer94			
diswersi	[-0.292419]	0.158845	-0.155235
	-0.451264	0.306859	-0.140794
	$\begin{bmatrix} -0.451264 \\ -0.046931 \end{bmatrix}$	0.111913	-0.086643
0.5	L		
answer95	[ 0.078652	-0.033708	-0.101124
	-0.016854	-0.033708 $-0.171348$	$\begin{bmatrix} -0.101124 \\ -0.014045 \end{bmatrix}$
	0.117978	-0.171348 $0.199438$	0.098315
	0.117976	0.199456	0.096515
answer96	F		
	-0.156863	0.019608	0.235294
	-0.921569	0.490196	0.882353
	[ 1.274510	-0.784314	-1.411765
answer97			
	0.018957	-0.071090	-0.068720
		-0.127962	-0.023697
	-0.165877 $0.104265$	0.109005	-0.127962
	L	9	]

answer98							
answerse	[-0.81]	.8182	0.545	5455	-0.18	31818	
	$\begin{bmatrix} -1.24 \\ -0.12 \end{bmatrix}$	2424	0.939		-0.42	I .	
	[-0.12]	21212	-0.03	30303	-0.21	2121	
answer99	-					7	
	0.17	3432	-0.08		0.1070	I	
	0.00	73432 97380 23616	-0.08		0.025	I	
	[0.12	3010	0.016	6000	0.1820	097]	
answer100	Γ 0.07	2200	0.196	6354	0.263	0590 J	
	$\begin{bmatrix} -0.07 \\ -0.01 \\ -0.08 \end{bmatrix}$	4440 4440	0.120		0.256	I	
	-0.01	3032	-0.10		-0.04	I .	
answer101	L 0.00	0002	0.10	1000	0.01	.0001]	
answeriui	Г						¬
	0.280000	-0.04		-0.05		-0.20800	- 1
	$\begin{bmatrix} 0.260000 \\ 0.400000 \\ -0.240000 \\ -0.480000 \end{bmatrix}$	-0.13		-0.05		-0.11500	- 1
	0.240000	0.070 $0.015$		-0.05		0.164000	- 1
	[-0.460000	0.016	)000	0.040	000	0.278000	ر '
answer102							
	0.047005	-0.06	32527	0.069	305	-0.00524	7
	$ \begin{array}{c c} -0.033450 \\ -0.057062 \end{array} $	-0.15	60853	0.062	309	0.036292	2
	-0.057062	-0.19		-0.07		-0.11456	- 1
	[-0.098382]	-0.03	31920	-0.05	2033	-0.12855	3
answer103							
	0.097426	0.00	14397	-0.10	05502	0.029278	٦
	-0.144876	-0.0			1343	0.023210	- 1
		0.05			6103	0.006058	- 1
	-0.194346		40636		4240	0.014134	- 1
answer104	L						_
answer 104	Годдооо	0.40				0.000046	. ¬
	0.113988	-0.10		0.067		0.038840	- 1
	-0.084999 $0.000563$	0.107		-0.06 $-0.01$		-0.14748 $0.007599$	- 1
	0.000303 $0.159302$	-0.10 $-0.18$		-0.01		0.007598 $0.150577$	- 1
	0.109302	-0.10	01149	0.004	:001	0.100011	J
answer105							
	0.025197	0.100	0262	0.051	444	-0.01889	8
	0.045144	0.193		0.064		0.132808	- 1
	0.032021	0.176		-0.03		0.059318	- 1
	[-0.133858]	-0.17	8478	0.018	373	-0.14960	6
answer106							
	[-0.354497]	-0.37	0370	-0.03	7037	-0.04232	ر 18
	-0.137566	0.259		-0.07		0.058201	- 1
	-0.433862	-0.25		0.074		-0.20105	
	0.116402	0.203	3704	-0.12	9630	0.066138	

### ${\bf answer 107}$

Γ	0.019355	-0.083871	0.090323	-0.019355
	-0.085887	-0.080948	0.083569	0.007762
1	0.074597	0.025706	0.009577	0.066028
1	-0.028226	0.111895	-0.017137	-0.065524

### ${\bf answer 108}$

0.104517	0.037422	-0.070063	-0.055885
-0.055720	0.096769	-0.022585	0.036103
-0.008572	-0.023574	-0.118859	0.044016
-0.097923	-0.019288	0.084570	-0.054896

### ${\bf answer 109}$

0.036072	-0.076653	0.045090	0.009519
-0.274549	-0.041583	-0.093186	0.246994
-0.344689	-0.017535	0.069138	0.381263
-0.302605	0.018036	-0.128257	0.350701

### ${\bf answer 110}$

-0.021004	0.078216	-0.080216	0.043209
-0.058812	0.019004	-0.024605	-0.079016
0.088018	0.148430	-0.044809	-0.038208
-0.078016	0.004801	0.130626	-0.125225

### ${\bf answer 111}$

I	-0.237552	0.048755	-0.271784	0.116183
	-0.168050	-0.033195	-0.080913	-0.068465
	-0.173237	0.092324	-0.259336	0.049793
ı	0.088174	-0.133817	0.033195	-0.010373

### answer112

-0.065210	0.085099	0.053472	0.044017
0.053146	0.075644	-0.063580	0.039126
-0.117705	-0.161396	0.036518	0.054451
0.098957	0.073362	0.028856	0.020704

### answer113

0.133333	-0.162963	-0.229630	-0.259259
-0.306667	0.330370	0.183704	0.307407
-0.306667	0.441481	0.294815	0.529630
-0.146667	0.090370	0.063704	0.207407

0.106137	-0.033073	-0.062752	-0.014588
-0.019618	0.038104	-0.022762	0.054829
-0.121227	0.081615	-0.012450	-0.097082
0.005030	0.067153	0.108400	0.037223

### ${\bf answer 115}$

0.032437	-0.091649	-0.026053	0.023376
-0.123262	0.126043	-0.078777	0.066728
0.020389	-0.121100	0.075687	-0.083719
-0.008341	0.039440	-0.066317	-0.031408

### ${\bf answer 116}$

0.123044	-0.014185	0.002775	-0.002544
-0.022666	0.032688	0.037083	0.049341
0.049649	-0.078406	-0.006399	0.089199
-0.035078	0.016575	-0.068460	0.062755

### ${\bf answer 117}$

-0.117043	-0.017659	0.146612	-0.185216
0.219713	0.215606	-0.022587	0.098563
-0.271047	-0.114579	0.160575	-0.155236
0.004107	-0.080082	0.036961	0.020534

### ${\bf answer 118}$

-0.128687	0.026387	0.032612	-0.241001
-0.063599	-0.031123	0.048714	0.017591
0.000947	0.034506	-0.049662	0.084844
0.071854	-0.096752	-0.052909	0.150338

### ${\bf answer 119}$

-0.495910	0.686094	-0.429448	-0.594070
0.080777	-0.074642	0.018405	0.142127
0.085890	-0.092025	-0.018405	0.024540
-0.793456	0.897751	-0.687117	-0.750511

### answer 120

-0.185714	-0.233143	0.055429	0.082286
-0.071429	-0.194286	-0.037143	0.068571
0.114286	-0.081143	-0.012571	0.146286
-0.014286	0.105143	-0.103429	0.021714

### ${\bf answer 121}$

-0.007610	-0.019248	-0.055058	0.079230
-0.059087	0.262310	-0.133393	-0.149508
-0.057296	-0.321397	0.173679	0.067144
0.165622	0.007162	-0.095792	0.040286

-0.205438	0.036254	0.039275	0.033233
0.283988	-0.135677	-0.131832	-0.048613
0.084592	0.011810	-0.085691	0.018402
-0.123867	0.128811	-0.004394	-0.101620

### ${\bf answer 123}$

0.370968	-2.500000	2.516129	0.258065
-0.822581	3.500000	-3.709677	-0.354839
-0.766129	3.750000	-3.935484	-0.467742
-0.741935	4.000000	-4.032258	-0.516129

### answer 124

-0.112795	-0.175168	0.260565	0.016613
-0.148062	-0.170504	0.140484	0.076071
-0.088312	-0.013116	0.087730	0.082775
-0.119207	-0.265229	0.329642	0.118333

### ${\bf answer 125}$

-0.057618	0.180538	-0.107554	0.087068
-0.056338	0.309859	0.028169	-0.070423
0.121639	0.285531	-0.106274	0.038412
0.129321	0.061460	-0.291933	0.093470

### ${\bf answer 126}$

0.015460	-0.047153	-0.162587	-0.122649
0.005926	0.131925	0.154342	0.086318
-0.135274	0.162587	0.172636	0.073177
-0.104097	0.117495	0.028086	0.092502

### answer 127

0.107872	0.052478	-0.002915	0.093294
0.029155	0.194363	0.026239	0.160350
-0.043732	-0.624879	-0.539359	-0.740525
0.002915	-0.313897	-0.297376	-0.483965

### answer 128

-0.157459	0.411602	0.118785	-0.359116
0.058011	-0.256906	-0.201657	0.237569
-0.535912	0.944751	0.386740	-1.099448
0.122928	-0.330110	-0.189227	0.455801

### answer 129

0.047042	-0.050349	0.053289	0.023888
-0.008453	-0.108140	0.045112	-0.074605
-0.027196	0.075983	0.047317	0.064315
-0.064315	0.014149	-0.080669	0.084528

-0.057255	0.018396	0.100041	-0.122778
-0.019016	-0.145515	-0.150889	0.139727
0.002274	-0.004341	-0.079785	-0.038446
0.078131	0.032658	0.076478	-0.139314

-0.627144	0.176589	0.586781	-0.282038
-0.309788	0.041372	0.243189	-0.040363
-0.234107	0.102926	0.239152	-0.027245
0.679112	-0.220989	-0.542886	0.264379

### answer 132

-0.572072	-0.252252	-0.270270	0.094595
1.355856	0.495495	0.459459	-0.310811
1.003378	0.324324	0.418919	-0.246622
-0.390766	-0.180180	-0.121622	0.192568

### answer 133

-0.086207	-0.000000	-0.120690	0.034483
0.735632	-0.666667	0.896552	0.172414
-0.856322	0.666667	-0.965517	-0.224138
-0.699234	0.555556	-0.701149	-0.109195

### ${\bf answer 134}$

-1.033149	-1.331492	0.254144	-1.220994
0.574586	0.745856	-0.071823	0.497238
0.475138	0.751381	-0.309392	0.834254
0.088398	-0.116022	-0.011050	-0.077348

### ${\bf answer 135}$

0.078009	-0.030461	0.029718	0.069094
-0.019465	0.005696	0.049728	0.045617
-0.024220	-0.081971	0.066964	-0.004309
0.018871	0.025012	0.035760	-0.051857

### answer136

-0.105413	-0.022792	-0.096866	-0.213675
0.062678	0.027066	-0.009972	-0.183761
0.034188	-0.053419	-0.164530	-0.032051
0.048433	0.111823	0.037749	0.267094

### answer 137

0.008595	0.057851	-0.031736	-0.023471
-0.034711	-0.041322	0.051240	-0.097521
0.031074	0.132231	0.116033	-0.007934
0.168430	0.152893	0.070413	0.020826

30.000000	-41.000000	-9.000000	-73.000000
16.000000	-21.000000	-4.000000	-39.000000
30.000000	-40.000000	-8.000000	-73.000000
-3.000000	4.000000	1.000000	7.000000

answer139				
	「 0.133987	0.032680	0.058824	0.084967
	-0.012745	-0.037255	0.052941	0.043137
	0.170261	-0.053595	0.023529	0.000654
	[-0.030065]	0.032680 $-0.037255$ $-0.053595$ $-0.036601$	-0.105882	0.024837
answer140				
	$\begin{bmatrix} 0.933333 \\ 0.608333 \\ -0.312500 \\ 0.029167 \end{bmatrix}$	1.133333	0.266667	-0.422222
	0.608333	0.783333	0.191667	-0.397222
	-0.312500	-0.375000	-0.187500	0.062500
	0.029167	-0.058333	0.070833	-0.023611
answer141				
	$\begin{bmatrix} 0.079417 \\ -0.074554 \\ 0.092382 \\ 0.009724 \end{bmatrix}$	0.144787	0.019449	0.027553
	-0.074554	-0.129119	-0.181524	0.076175
	0.092382	-0.035656	-0.079417	-0.029173
	0.009724	-0.301999	-0.324149	0.207455
answer142				
	$\begin{bmatrix} -0.081472\\ 0.101183\\ -0.239159\\ 0.259198 \end{bmatrix}$	-0.007884	0.085414	0.042050
	0.101183	0.042050	-0.122208	0.109067
	-0.239159	-0.281209	0.379763	-0.166886
	0.259198	0.299277	-0.533837	0.237188
answer143				
	0.129853	-0.011602	-0.062918	0.134761
	0.189424	-0.090808	0.026774	0.208612
	-0.293173	0.022758	0.008032	-0.187416
	$\begin{bmatrix} 0.129853 \\ 0.189424 \\ -0.293173 \\ -0.008032 \end{bmatrix}$	-0.026774	-0.068273	-0.073628
answer144				
	$\begin{bmatrix} 1.286325 \\ -1.940171 \\ 1.337607 \\ 0.005470 \end{bmatrix}$	-1.487179	0.179487	-0.594017
	-1.940171	2.256410	-0.410256	0.786325
	1.337607	-1.410256	0.256410	-0.491453
	0.085470	-0.205128	0.128205	-0.162393
answer145				
	[-0.012987]	0.506494	-0.103896	0.025974
	-0.173160	-0.246753	-0.051948	0.012987
	0.164502	-0.415584	0.149351	-0.162338
	0.073593	0.129870	-0.077922	0.019481
answer146	_			
	0.217587	0.027911	0.027311	-0.141657
	-0.133553	-0.044718	0.031513	-0.009604

0.111281	-0.040272	-0.013197	-0.111026
0.038314	-0.061303	0.030651	0.019157
0.031162	-0.036526	-0.081737	0.015581
-0.043423	-0.063857	0.031928	-0.021711

### ${\bf answer 148}$

	0.126582	1.708861	-1.962025	-0.050633
l	0.164557	2.721519	-3.050633	-0.265823
l	0.059072	-0.869198	1.084388	0.109705
l	0.063291	0.354430	-0.481013	-0.025316

### answer149

-0.276214	0.056311	0.262621	0.026214
-0.135922	0.106796	0.213592	0.135922
-0.083495	-0.005825	0.188350	0.083495
-0.029126	-0.048544	-0.097087	0.029126

### answer150

-0.231085	-0.077713	0.044868	-0.167155
0.029326	0.073314	-0.023460	-0.049853
0.222287	0.055718	0.062170	0.082111
0.271554	0.178886	0.062757	0.158358

# 3 Matrix Determinant

answer1

15

answer2

23

answer3

4

answer4

11

answer5

121

 ${\bf answer 6}$ 

13

 ${\bf answer7}$ 

0

0	
answer8	14
answer9	-38
answer10	-11
answer11	-6
answer12	68
answer13	58
answer14	23
answer15	0
answer16	19
answer17	44
answer18	
answer19	32
answer20	76
answer21	-27
answer22	<b>-</b> 9
answer23	52
${ m answer} 24$	72
answer25	21
ans wei 20	94

answer26	
	65
answer27	-3
answer28	-57
answer29	79
answer30	32
answer31	14
answer32	-27
answer33	-21
answer34	
answer35	-105
answer36	36
answer37	0
answer38	-6
answer39	20
	54
answer40	-12
answer41	-57
answer42	-6
answer43	23

36
-49
-15
-71
-10
17
-59
576
31
-659
-287
-310
250
412
550
52
44
-23

answer62	-572
answer63	-24
answer64	768
answer65	738
answer66	296
answer67	201
answer68	-965
answer69	83
answer70	-100
answer71	180
answer72	399
answer73	-201
answer74	-69
answer75	-210
answer76	-753
answer77	111
answer78	-80
answer79	-194

answer80	85
answer81	-319
answer82	-585
answer83	-129
answer84	275
answer85	-563
answer86	59
answer87	248
answer88	358
answer89	184
answer90	-286
answer91	-201
answer92	523
answer93	382
answer94	-555
answer95	-1272
answer96	-346
answer97	-143

answer98	65
answer99	723
answer100	
answer101	-121
answer102	-464 $-6053$
answer103	
answer104	-23
answer105	5328
answer106	-2315 $-3446$
answer107	-3440 $-2350$
answer108	-2500 $4066$
answer109	
answer110	-8550 $-600$
answer111	-600 -4935
answer112	-4935 -1169
answer113	-1169 $-2652$
answer114	-2052 $3432$
answer115	2226
	2220

answer116	
answer117	585
ans wer i i	1912
answer118	5404
answer119	5
answer120	-5595
answer121	-11211
answer122	
answer123	2488
	-156
answer124	4928
answer125	-99
answer126	1440
answer127	-6990
answer128	-0990
answer129	578
	-197
answer130	3011
answer131	-651
answer132	-1839
answer133	1876

answer134	-544
answer135	-241
answer136	1970
answer137	9789
answer138	-12337
answer139	1116
answer140	-597
answer141	-2349
answer142	1130
answer143	862
answer144	12608
answer145	1824
answer146	6550
answer147	-5144
answer148	6959
answer149	1284
answer150	
	1663