# Matrix Practice Answer

# CBDT

# September 9, 2024

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# Contents

1 Matrix Multiplication

3 Matrix Determinant

2 Matrix Inverse

1 Matrix I	Multiplication
answer1	$\begin{bmatrix} -6 & 6 \\ 5 & -86 \end{bmatrix}$
answer2	$\begin{bmatrix} 24 & 8 \\ -45 & -45 \end{bmatrix}$
answer3 answer4	$\begin{bmatrix} -44 & -7 \\ 4 & 2 \end{bmatrix}$
answer5	$\begin{bmatrix} 2 & 46 \\ 37 & 5 \end{bmatrix}$
answer6	$\begin{bmatrix} -37 & -85 \\ -49 & 113 \end{bmatrix}$
answer7	$\begin{bmatrix} -35 & -68 \\ 10 & 6 \end{bmatrix}$
answer8	$\begin{bmatrix} 100 & 9 \\ -68 & -1 \end{bmatrix}$
	$\begin{bmatrix} 9 & 55 \\ 0 & -58 \end{bmatrix}$

answer10 
$$\begin{bmatrix} 5 & -12 \\ 100 & 64 \end{bmatrix}$$
answer10 
$$\begin{bmatrix} 15 & -18 \\ 45 & 36 \end{bmatrix}$$
answer11 
$$\begin{bmatrix} 45 & 18 \\ -61 & -9 \end{bmatrix}$$
answer12 
$$\begin{bmatrix} 64 & -35 \\ -41 & 25 \end{bmatrix}$$
answer13 
$$\begin{bmatrix} -39 & 51 \\ -15 & 21 \end{bmatrix}$$
answer14 
$$\begin{bmatrix} 50 & 42 \\ -24 & -56 \end{bmatrix}$$
answer16 
$$\begin{bmatrix} 9 & 11 \\ 66 & 86 \end{bmatrix}$$
answer17 
$$\begin{bmatrix} -39 & 24 \\ 126 & -36 \end{bmatrix}$$
answer18 
$$\begin{bmatrix} 74 & 12 \\ -78 & -24 \end{bmatrix}$$
answer19 
$$\begin{bmatrix} -2 & -5 \\ 93 & 12 \end{bmatrix}$$

answer22

 $\begin{bmatrix} -63 & 63 \\ -63 & 42 \end{bmatrix}$ 

 $\begin{bmatrix} 66 & -74 \\ -96 & 16 \end{bmatrix}$ 

 $\begin{bmatrix} 35 & 50 \\ -15 & -30 \end{bmatrix}$ 

$$\begin{bmatrix} 56 & 62 \\ -35 & -58 \end{bmatrix}$$

$$\begin{bmatrix} -24 & 54 \\ 62 & 49 \end{bmatrix}$$

$$\begin{bmatrix} 48 & 42 \\ -18 & -69 \end{bmatrix}$$

answer26

$$\begin{bmatrix} -41 & -34 \\ -39 & -42 \end{bmatrix}$$

answer27

$$\begin{bmatrix} -44 & -42 \\ 89 & 15 \end{bmatrix}$$

answer28

$$\begin{bmatrix} -32 & 96 \\ 30 & 24 \end{bmatrix}$$

answer29

$$\begin{bmatrix} 1 & -24 \\ 39 & -56 \end{bmatrix}$$

answer30

$$\begin{bmatrix} 1 & -58 \\ -73 & 84 \end{bmatrix}$$

answer31

$$\begin{bmatrix} -128 & 88 \\ -14 & 4 \end{bmatrix}$$

answer32

$$\begin{bmatrix} 18 & -25 \\ -12 & 35 \end{bmatrix}$$

 ${\bf answer 33}$ 

$$\begin{bmatrix} 76 & 31 \\ -52 & 9 \end{bmatrix}$$

answer34

$$\begin{bmatrix} -8 & -28 \\ 4 & -38 \end{bmatrix}$$

 ${\bf answer 35}$ 

$$\begin{bmatrix} -22 & -30 \\ -20 & -24 \end{bmatrix}$$

$$\begin{bmatrix} 4 & 49 \\ -20 & -2 \end{bmatrix}$$

$$\begin{bmatrix} 18 & 8 \\ -30 & -7 \end{bmatrix}$$

$$\begin{bmatrix} 24 & -114 \\ 99 & -57 \end{bmatrix}$$

$$\begin{bmatrix} -53 & -48 \\ 14 & 3 \end{bmatrix}$$

answer40

$$\begin{bmatrix} 53 & 5 \\ -60 & 68 \end{bmatrix}$$

answer41

$$\begin{bmatrix} -33 & 16 \\ 3 & 3 \end{bmatrix}$$

 ${\bf answer 42}$ 

$$\begin{bmatrix} -93 & 112 \\ -74 & 88 \end{bmatrix}$$

answer43

$$\begin{bmatrix} -7 & 15 \\ 6 & 50 \end{bmatrix}$$

answer44

$$\begin{bmatrix} 79 & -7 \\ -68 & 5 \end{bmatrix}$$

answer45

$$\begin{bmatrix} -28 & -12 \\ 42 & -49 \end{bmatrix}$$

 ${\bf answer 46}$ 

$$\begin{bmatrix} 45 & -47 \\ 69 & -87 \end{bmatrix}$$

 ${\bf answer 47}$ 

$$\begin{bmatrix} -115 & 15 \\ -79 & 10 \end{bmatrix}$$

answer48

$$\begin{bmatrix} 30 & -64 \\ -30 & 96 \end{bmatrix}$$

answer49

$$\begin{bmatrix} -72 & 64 \\ 117 & -40 \end{bmatrix}$$

$$\begin{bmatrix} 117 & -54 \\ 105 & -35 \end{bmatrix}$$

$$\begin{bmatrix} 118 & 84 & -25 \\ 150 & 52 & 57 \\ 48 & 66 & 8 \end{bmatrix}$$

$$\begin{bmatrix} 110 & 61 & 30 \\ 71 & -8 & 13 \\ 42 & 21 & 68 \end{bmatrix}$$

# answer53

$$\begin{bmatrix} -34 & -124 & -17 \\ 2 & -53 & -14 \\ 34 & 119 & 26 \end{bmatrix}$$

### answer54

$$\begin{bmatrix} 55 & -73 & 83 \\ -32 & 55 & -89 \\ -7 & -28 & 44 \end{bmatrix}$$

# answer55

$$\begin{bmatrix} 96 & 5 & 51 \\ 54 & 69 & -9 \\ 36 & -26 & -52 \end{bmatrix}$$

### answer56

$$\begin{bmatrix} 111 & -28 & -12 \\ 70 & 25 & -29 \\ -28 & -32 & -17 \end{bmatrix}$$

# answer57

$$\begin{bmatrix} -16 & 15 & 41 \\ 136 & -51 & -83 \\ -98 & 108 & -21 \end{bmatrix}$$

#### answer58

$$\begin{bmatrix} -34 & -17 & 79 \\ -9 & -30 & 33 \\ -39 & 6 & 75 \end{bmatrix}$$

#### answer59

$$\begin{bmatrix} -76 & -3 & 53 \\ 72 & 8 & -92 \\ -5 & 98 & -76 \end{bmatrix}$$

### answer60

$$\begin{bmatrix} -26 & -32 & 6 \\ 122 & -6 & -30 \\ -25 & -22 & 26 \end{bmatrix}$$

$$\begin{bmatrix} 35 & -6 & -19 \\ -55 & 38 & 35 \\ 26 & 1 & 44 \end{bmatrix}$$

$$\begin{bmatrix} 4 & -43 & 50 \\ 57 & 37 & -44 \\ -58 & -20 & 34 \end{bmatrix}$$

$$\begin{bmatrix} 77 & -15 & -38 \\ -16 & 10 & 74 \\ -10 & 0 & -10 \end{bmatrix}$$

### answer64

$$\begin{bmatrix} 38 & -60 & 24 \\ -48 & 175 & 1 \\ -69 & 96 & -45 \end{bmatrix}$$

### answer65

$$\begin{bmatrix} 111 & 56 & 146 \\ -110 & -82 & -79 \\ 43 & -5 & 109 \end{bmatrix}$$

## answer66

$$\begin{bmatrix} -17 & -65 & 54 \\ 44 & 77 & -107 \\ -22 & 22 & 5 \end{bmatrix}$$

### answer67

$$\begin{bmatrix} -9 & 35 & 92 \\ 19 & -65 & -170 \\ -34 & -2 & -5 \end{bmatrix}$$

# ${\bf answer 68}$

$$\begin{bmatrix} 70 & -108 & 16 \\ 40 & -76 & 42 \\ -3 & 36 & -46 \end{bmatrix}$$

### answer69

$$\begin{bmatrix} 71 & -23 & -22 \\ 58 & -54 & 4 \\ -59 & -8 & -92 \end{bmatrix}$$

#### answer70

$$\begin{bmatrix} 49 & -115 & 5 \\ -5 & -47 & 12 \\ 46 & -113 & 30 \end{bmatrix}$$

### answer71

$$\begin{bmatrix} -16 & -121 & -21 \\ -56 & -68 & -72 \\ 60 & 48 & 68 \end{bmatrix}$$

### ${\bf answer 72}$

$$\begin{bmatrix} 21 & 110 & -168 \\ 2 & -31 & 49 \\ -16 & -22 & 50 \end{bmatrix}$$

$$\begin{bmatrix} 72 & -8 & 12 \\ -90 & -104 & 102 \\ -90 & -116 & 120 \end{bmatrix}$$

$$\begin{bmatrix} -9 & -37 & 3 \\ -35 & 15 & -20 \\ -93 & 25 & -38 \end{bmatrix}$$

# answer75

$$\begin{bmatrix} 11 & 10 & 20 \\ -53 & -70 & 95 \\ 8 & 16 & -33 \end{bmatrix}$$

### answer76

$$\begin{bmatrix} -30 & -30 & 50 \\ 43 & 30 & -69 \\ -12 & 0 & 6 \end{bmatrix}$$

# answer77

$$\begin{bmatrix} 63 & 57 & -40 \\ -4 & 61 & -40 \\ -17 & -5 & 25 \end{bmatrix}$$

### answer78

$$\begin{bmatrix} -12 & 52 & -36 \\ 21 & -142 & 22 \\ 3 & -15 & -52 \end{bmatrix}$$

### answer79

$$\begin{bmatrix} -46 & 130 & 70 \\ 12 & -131 & -21 \\ 46 & -42 & -5 \end{bmatrix}$$

### answer80

$$\begin{bmatrix} -3 & -6 & 66 \\ -9 & -45 & 23 \\ -4 & 25 & 74 \end{bmatrix}$$

#### answer81

$$\begin{bmatrix} -36 & 40 & -46 \\ -18 & 28 & -25 \\ -60 & -16 & 58 \end{bmatrix}$$

# ${\bf answer 82}$

$$\begin{bmatrix} 26 & -7 & -64 \\ -51 & 61 & 48 \\ -64 & 50 & 38 \end{bmatrix}$$

$$\begin{bmatrix} -75 & -72 & 3 \\ -7 & -21 & -27 \\ 26 & 61 & 60 \end{bmatrix}$$

$$\begin{bmatrix} 54 & -9 & 31 \\ 76 & 52 & -31 \\ -56 & 0 & -28 \end{bmatrix}$$

$$\begin{bmatrix} 24 & -44 & -94 \\ 60 & 46 & 85 \\ 67 & 45 & 88 \end{bmatrix}$$

### answer86

$$\begin{bmatrix} -90 & 0 & 109 \\ 153 & 75 & -1 \\ -168 & -70 & 49 \end{bmatrix}$$

#### answer87

$$\begin{bmatrix} -82 & -6 & 44 \\ 25 & 19 & 32 \\ 24 & -1 & -25 \end{bmatrix}$$

# answer88

$$\begin{bmatrix} 5 & 29 & -68 \\ 81 & 26 & 72 \\ 21 & 11 & 12 \end{bmatrix}$$

# answer89

$$\begin{bmatrix} -81 & 21 & 33 \\ 59 & 34 & -37 \\ 65 & -143 & -19 \end{bmatrix}$$

# answer90

$$\begin{bmatrix} -20 & -12 & 38 \\ -48 & -10 & -8 \\ -125 & 55 & -146 \end{bmatrix}$$

# answer91

$$\begin{bmatrix} -15 & 10 & -72 \\ -17 & -30 & -22 \\ -33 & 50 & 18 \end{bmatrix}$$

#### answer92

$$\begin{bmatrix} 6 & 113 & -34 \\ -8 & -2 & -24 \\ -20 & 22 & -60 \end{bmatrix}$$

### answer93

$$\begin{bmatrix} 58 & 80 & 35 \\ 41 & -32 & 13 \\ 107 & -14 & -23 \end{bmatrix}$$

$$\begin{bmatrix} -66 & 63 & -71 \\ 43 & -41 & 45 \\ 36 & -29 & 61 \end{bmatrix}$$

$$\begin{bmatrix} -13 & -51 & 2 \\ -3 & 53 & 28 \\ 112 & 70 & -84 \end{bmatrix}$$

$$\begin{bmatrix} -46 & 48 & 23 \\ 44 & -44 & -5 \\ -41 & 35 & 26 \end{bmatrix}$$

# answer97

$$\begin{bmatrix} -24 & -84 & 108 \\ -44 & -38 & 111 \\ -26 & 6 & -27 \end{bmatrix}$$

# ${\bf answer 98}$

$$\begin{bmatrix} 0 & -12 & -96 \\ -127 & 73 & 20 \\ 52 & -64 & -110 \end{bmatrix}$$

### answer99

$$\begin{bmatrix} 88 & 75 & -28 \\ 56 & 5 & 6 \\ 33 & -13 & 19 \end{bmatrix}$$

### answer100

$$\begin{bmatrix} 61 & -16 & 55 \\ -40 & 15 & -37 \\ 19 & 36 & 43 \end{bmatrix}$$

### answer101

$$\begin{bmatrix} -73 & 65 & 88 & -127 \\ -68 & 0 & 23 & -57 \\ -62 & -58 & -20 & -12 \\ 62 & -50 & -35 & 50 \end{bmatrix}$$

# answer 102

$$\begin{bmatrix} 75 & -7 & -76 & 41 \\ 5 & 118 & 32 & 42 \\ -26 & -9 & 132 & -49 \\ -79 & -46 & -42 & 12 \end{bmatrix}$$

## answer103

$$\begin{bmatrix} 3 & 71 & 33 & 60 \\ 27 & -95 & -79 & -62 \\ 90 & 32 & -2 & 58 \\ 10 & 6 & 11 & -10 \end{bmatrix}$$

$$\begin{bmatrix} 13 & -119 & 107 & 51 \\ -84 & 66 & 34 & -48 \\ 87 & -49 & -19 & -26 \\ -34 & -2 & 10 & 61 \end{bmatrix}$$

$$\begin{bmatrix} 81 & -24 & -30 & -27 \\ -4 & 74 & 30 & -9 \\ -19 & -106 & -103 & -52 \\ -158 & 16 & -44 & -80 \end{bmatrix}$$

$$\begin{bmatrix} 26 & -32 & -3 & 31 \\ 13 & -54 & -41 & 24 \\ -72 & 11 & 4 & -36 \\ -42 & -20 & -4 & 0 \end{bmatrix}$$

### answer107

$$\begin{bmatrix} -104 & 106 & -3 & 102 \\ 18 & -126 & 66 & -4 \\ -64 & -70 & 73 & 65 \\ 110 & 24 & 1 & -45 \end{bmatrix}$$

#### answer108

$$\begin{bmatrix} -8 & -37 & 3 & 13 \\ 45 & -59 & -7 & 11 \\ 37 & -95 & -41 & -33 \\ 22 & 12 & -62 & 80 \end{bmatrix}$$

#### answer109

$$\begin{bmatrix} -47 & 80 & 42 & -35 \\ 36 & -79 & 17 & -35 \\ 74 & -13 & -66 & 57 \\ -13 & -22 & -2 & 6 \end{bmatrix}$$

#### answer110

$$\begin{bmatrix} 27 & 201 & -63 & 9 \\ 0 & 65 & -76 & 29 \\ 12 & -16 & 78 & 54 \\ -8 & -37 & 58 & -11 \end{bmatrix}$$

### answer111

$$\begin{bmatrix} -22 & 2 & 76 & -23 \\ -54 & 29 & -48 & -62 \\ 58 & -26 & 140 & -52 \\ 32 & 5 & 44 & -68 \end{bmatrix}$$

### answer112

$$\begin{bmatrix} -58 & 139 & 70 & -66 \\ 120 & -31 & -70 & -59 \\ 165 & -96 & -95 & -13 \\ 148 & -80 & -98 & -84 \end{bmatrix}$$

$$\begin{bmatrix} 54 & -36 & 33 & 22 \\ -29 & -33 & -19 & -49 \\ 22 & -85 & 2 & 4 \\ 85 & 80 & -38 & -61 \end{bmatrix}$$

$$\begin{bmatrix} -26 & 49 & 7 & 70 \\ -2 & -33 & -57 & -42 \\ 3 & 109 & 172 & 1 \\ -18 & 88 & 78 & 86 \end{bmatrix}$$

$$\begin{bmatrix} 48 & 32 & 74 & -114 \\ -67 & 65 & -20 & -23 \\ -159 & 43 & -52 & 30 \\ 7 & 63 & -49 & 48 \end{bmatrix}$$

### answer116

$$\begin{bmatrix} -75 & -98 & 70 & 12 \\ 70 & -49 & -8 & 20 \\ -71 & -87 & 92 & 7 \\ -23 & 21 & -32 & -4 \end{bmatrix}$$

#### answer117

$$\begin{bmatrix} 52 & -45 & -8 & 59 \\ 76 & -27 & -63 & -118 \\ -65 & 74 & 17 & 134 \\ 30 & -37 & -84 & -9 \end{bmatrix}$$

#### answer118

$$\begin{bmatrix} -42 & -50 & 97 & 57 \\ -40 & -51 & 116 & 72 \\ -54 & -19 & 52 & -62 \\ -25 & -12 & -53 & -124 \end{bmatrix}$$

#### answer119

$$\begin{bmatrix} -31 & 75 & -53 & -47 \\ 68 & 32 & 0 & -8 \\ 62 & 24 & 24 & 70 \\ 2 & -107 & 65 & 53 \end{bmatrix}$$

### answer120

$$\begin{bmatrix} -22 & -119 & -64 & -22 \\ 12 & 4 & -142 & -40 \\ 62 & 27 & -2 & 2 \\ -12 & 139 & 24 & -32 \end{bmatrix}$$

### answer121

$$\begin{bmatrix} 26 & 42 & -32 & -86 \\ -108 & -26 & -26 & 86 \\ 94 & 111 & 64 & -45 \\ 69 & 65 & 13 & 14 \end{bmatrix}$$

$$\begin{bmatrix} -95 & -85 & -23 & -91 \\ -10 & 27 & -115 & -181 \\ 7 & 29 & 12 & -70 \\ 159 & 126 & 62 & 24 \end{bmatrix}$$

$$\begin{bmatrix} -19 & -30 & 31 & -21 \\ -84 & 72 & 76 & -125 \\ -12 & -82 & -88 & 28 \\ -62 & 63 & -24 & -44 \end{bmatrix}$$

$$\begin{bmatrix} 87 & 42 & -83 & 120 \\ 59 & 75 & -84 & 75 \\ -26 & -102 & 58 & -96 \\ 9 & -21 & 0 & -18 \end{bmatrix}$$

#### answer125

$$\begin{bmatrix} -88 & 21 & 70 & -39 \\ 93 & -40 & -63 & 31 \\ -5 & 65 & 20 & -19 \\ 49 & -22 & -54 & 53 \end{bmatrix}$$

#### answer126

$$\begin{bmatrix} 58 & 18 & 53 & -58 \\ -170 & 70 & 18 & 62 \\ 172 & -20 & 54 & -60 \\ 88 & 25 & 81 & 10 \end{bmatrix}$$

#### answer127

$$\begin{bmatrix} -66 & -27 & 6 & 83 \\ -92 & -46 & 32 & 80 \\ 6 & 23 & -60 & 40 \\ 21 & 61 & -18 & -74 \end{bmatrix}$$

#### answer128

$$\begin{bmatrix} -10 & 133 & -51 & -12 \\ -22 & 0 & -32 & 77 \\ 14 & 104 & -78 & 7 \\ -24 & -33 & -3 & 54 \end{bmatrix}$$

### answer129

$$\begin{bmatrix} 11 & -62 & -39 & -49 \\ 77 & -11 & -44 & -44 \\ -12 & -80 & -50 & 16 \\ -78 & 72 & 72 & -30 \end{bmatrix}$$

### answer130

$$\begin{bmatrix} -80 & 31 & -104 & -18 \\ -18 & -21 & 2 & 57 \\ 60 & -7 & -12 & 19 \\ 184 & 22 & 160 & 12 \end{bmatrix}$$

$$\begin{bmatrix} 4 & 21 & 4 & 30 \\ 0 & -24 & -70 & -38 \\ -54 & -4 & -132 & 166 \\ 6 & 128 & 22 & -9 \end{bmatrix}$$

$$\begin{bmatrix} 27 & -28 & -36 & -33 \\ -105 & -37 & 21 & -14 \\ -100 & -78 & 44 & -61 \\ -22 & 55 & 15 & -48 \end{bmatrix}$$

$$\begin{bmatrix} -77 & 3 & 33 & 11 \\ -111 & -39 & -27 & -195 \\ -21 & 116 & 34 & -11 \\ -75 & -64 & -56 & -161 \end{bmatrix}$$

### answer 134

$$\begin{bmatrix} 37 & 18 & -36 & -94 \\ -64 & -20 & 26 & 140 \\ 15 & -52 & 88 & -50 \\ -28 & 14 & 94 & 2 \end{bmatrix}$$

#### answer135

$$\begin{bmatrix} 64 & -28 & 49 & -19 \\ 11 & 75 & 77 & 36 \\ 73 & -40 & -9 & -17 \\ -15 & 17 & -8 & 9 \end{bmatrix}$$

#### answer136

$$\begin{bmatrix} 107 & 22 & -29 & -54 \\ -70 & 115 & 94 & 86 \\ -25 & 108 & 67 & 50 \\ -82 & 0 & -8 & 30 \end{bmatrix}$$

#### answer137

$$\begin{bmatrix} -63 & -39 & -10 & -31 \\ 71 & -12 & -25 & 58 \\ -8 & -63 & 3 & 87 \\ -48 & 30 & 14 & -68 \end{bmatrix}$$

### answer138

$$\begin{bmatrix} -12 & 91 & 72 & 25 \\ 75 & 17 & -63 & -59 \\ -13 & 50 & -45 & 37 \\ 36 & 28 & 30 & -33 \end{bmatrix}$$

### answer139

$$\begin{bmatrix} 39 & 1 & 69 & 41 \\ 29 & -56 & 8 & 55 \\ 60 & -25 & -70 & 7 \\ 107 & 24 & -12 & 41 \end{bmatrix}$$

$$\begin{bmatrix} 23 & 72 & 56 & 101 \\ 48 & -99 & 27 & -90 \\ -130 & 61 & 25 & 7 \\ 34 & -67 & -31 & -67 \end{bmatrix}$$

$$\begin{bmatrix} 96 & 81 & 79 & 31 \\ -4 & -27 & -32 & -38 \\ 100 & -60 & 5 & -17 \\ 0 & 54 & -41 & 119 \end{bmatrix}$$

$$\begin{bmatrix} -57 & -2 & 59 & 36 \\ -18 & 91 & -63 & 61 \\ 10 & 34 & -49 & -8 \\ 26 & -9 & -32 & -33 \end{bmatrix}$$

#### answer143

$$\begin{bmatrix} 30 & 80 & -30 & -95 \\ -11 & 48 & -22 & -65 \\ -42 & -126 & 45 & 100 \\ 173 & -72 & 21 & 141 \end{bmatrix}$$

#### answer144

$$\begin{bmatrix} -27 & 7 & 12 & 49 \\ 21 & -27 & -70 & -27 \\ 9 & -16 & 56 & 89 \\ -48 & -46 & 107 & 50 \end{bmatrix}$$

#### answer145

$$\begin{bmatrix} -98 & 13 & 74 & 60 \\ 5 & 29 & 63 & 23 \\ 34 & 5 & -165 & -140 \\ -17 & 46 & -3 & 31 \end{bmatrix}$$

#### answer146

$$\begin{bmatrix} -37 & 5 & -4 & 25 \\ 63 & 6 & -39 & -3 \\ 20 & -42 & -33 & 8 \\ -32 & 18 & -24 & 0 \end{bmatrix}$$

### answer147

$$\begin{bmatrix} 49 & -91 & -100 & 20 \\ 7 & 68 & 99 & 178 \\ -15 & -42 & -57 & -119 \\ -4 & -40 & 16 & 157 \end{bmatrix}$$

### answer148

$$\begin{bmatrix} -101 & 102 & -100 & -25 \\ 100 & -112 & 22 & 162 \\ -104 & 108 & -91 & -54 \\ -111 & 37 & -74 & -151 \end{bmatrix}$$

$$\begin{bmatrix} -88 & -27 & 65 & -71 \\ -72 & 60 & 64 & -96 \\ 19 & 55 & 11 & 76 \\ -108 & 14 & 41 & -9 \end{bmatrix}$$

answer12

$$\begin{bmatrix} 12 & 115 & 52 & -20 \\ 60 & 65 & 73 & 45 \\ -36 & -93 & -2 & 62 \\ 60 & 3 & 32 & 40 \end{bmatrix}$$

# 2 Matrix Inverse

answer1	$\begin{bmatrix} 0.333333 & -0.0000000 \\ -0.777778 & 0.333333 \end{bmatrix}$
answer2	$\begin{bmatrix} -0.400000 & 1.000000 \\ -0.200000 & -0.000000 \end{bmatrix}$
answer3	$\begin{bmatrix} -0.466667 & -0.333333 \\ -0.266667 & -0.333333 \end{bmatrix}$
answer4	$ \begin{bmatrix} -0.187500 & 0.218750 \\ 0.062500 & 0.093750 \end{bmatrix} $
answer5	$\begin{bmatrix} -0.142857 & -0.238095 \\ -0.428571 & -0.380952 \end{bmatrix}$
answer6	$\begin{bmatrix} 0.076923 & -0.076923 \\ -0.173077 & -0.076923 \end{bmatrix}$
answer7	$\begin{bmatrix} 0.142857 & 0.071429 \\ -0.214286 & 0.142857 \end{bmatrix}$
answer8	$\begin{bmatrix} -0.080000 & -0.120000 \\ 0.140000 & -0.040000 \end{bmatrix}$
answer9	$\begin{bmatrix} 0.052632 & -0.105263 \\ 0.184211 & 0.131579 \end{bmatrix}$
answer10	$\begin{bmatrix} 1.500000 & -0.250000 \\ 2.000000 & -0.500000 \end{bmatrix}$
answer11	[ 0 500000 2 500000]

 $\begin{bmatrix} 0.166667 & 0.000000 \\ -0.016667 & -0.100000 \end{bmatrix}$ 

 $\begin{bmatrix} -0.500000 & 3.500000 \\ -0.500000 & 4.500000 \end{bmatrix}$ 

answer13	$\begin{bmatrix} 0.176471 & -0.470588 \\ 0.235294 & -0.294118 \end{bmatrix}$
answer14	$\begin{bmatrix} 1.250000 & -0.750000 \\ -1.000000 & 0.500000 \end{bmatrix}$
answer15	$\begin{bmatrix} -0.833333 & -0.166667 \\ 0.166667 & -0.166667 \end{bmatrix}$
answer16	$\begin{bmatrix} 2.000000 & 3.500000 \\ -1.000000 & -2.000000 \end{bmatrix}$
answer17	$\begin{bmatrix} 0.083333 & 0.055556 \\ 0.125000 & -0.083333 \end{bmatrix}$
answer18	$\begin{bmatrix} -0.1111111 & 0.055556 \\ 0.083333 & 0.083333 \end{bmatrix}$
answer19	$\begin{bmatrix} -0.166667 & 0.166667 \\ 0.104167 & 0.020833 \end{bmatrix}$
answer20	$\begin{bmatrix} -0.166667 & -0.208333 \\ -0.000000 & -0.250000 \end{bmatrix}$
answer21	$\begin{bmatrix} 0.000000 & 0.111111 \\ -0.100000 & -0.044444 \end{bmatrix}$
answer22	$\begin{bmatrix} -0.080645 & 0.145161 \\ 0.129032 & -0.032258 \end{bmatrix}$
answer23	$\begin{bmatrix} -0.076923 & 0.076923 \\ 0.153846 & 0.179487 \end{bmatrix}$
answer24	$\begin{bmatrix} 0.108108 & 0.027027 \\ 0.027027 & -0.243243 \end{bmatrix}$
answer25	$\begin{bmatrix} 0.161290 & -0.064516 \\ -0.048387 & -0.080645 \end{bmatrix}$
answer26	$\begin{bmatrix} -0.272727 & -0.090909 \\ 0.030303 & 0.121212 \end{bmatrix}$

answer27		
aliswei 21	$\begin{bmatrix} 0.222222\\ 0.027778 \end{bmatrix}$	$\begin{bmatrix} 0.111111 \\ 0.138889 \end{bmatrix}$
answer28	$\begin{bmatrix} 1.250000 \\ -0.750000 \end{bmatrix}$	$\begin{bmatrix} -1.000000 \\ 0.500000 \end{bmatrix}$
answer29	$\begin{bmatrix} -0.100000 \\ -0.000000 \end{bmatrix}$	$0.116667 \\ -0.166667$
answer30	$\begin{bmatrix} -0.750000 \\ 0.250000 \end{bmatrix}$	$\begin{bmatrix} -0.625000 \\ 0.375000 \end{bmatrix}$
answer31	$\begin{bmatrix} -0.583333 \\ -0.166667 \end{bmatrix}$	
answer32	$\begin{bmatrix} 0.043478 \\ -0.304348 \end{bmatrix}$	
answer33	$\begin{bmatrix} 0.285714 \\ -0.071429 \end{bmatrix}$	-
answer34	$\begin{bmatrix} 0.055556 \\ -0.111111 \end{bmatrix}$	-
answer35	$\begin{bmatrix} 0.055556 \\ -0.125000 \end{bmatrix}$	_
answer36	$\begin{bmatrix} -0.035294 \\ 0.094118 \end{bmatrix}$	
answer37	$\begin{bmatrix} -0.128205 \\ -0.089744 \end{bmatrix}$	_
answer38	$\begin{bmatrix} -0.060000 \\ -0.100000 \end{bmatrix}$	-0.200000
answer39	_	$   \begin{bmatrix}     -0.132075 \\     0.056604   \end{bmatrix} $
answer40		$   \begin{bmatrix}     0.000000 \\     -0.200000   \end{bmatrix} $
	L	

answer41	$\begin{bmatrix} -0.333333 & -0.333333 \\ 0.222222 & 0.111111 \end{bmatrix}$
answer42	$\begin{bmatrix} 0.375000 & 1.000000 \\ 0.125000 & 0.000000 \end{bmatrix}$
answer43	$\begin{bmatrix} 0.041667 & 0.125000 \\ 0.291667 & -0.125000 \end{bmatrix}$
answer44	$\begin{bmatrix} -0.190476 & -0.071429 \\ 0.142857 & -0.071429 \end{bmatrix}$
answer45	$\begin{bmatrix} 3.000000 & 2.000000 \\ -1.000000 & -0.500000 \end{bmatrix}$
answer46	$\begin{bmatrix} -0.088889 & 0.066667 \\ 0.066667 & 0.200000 \end{bmatrix}$
answer47	$\begin{bmatrix} -1.000000 & -0.000000 \\ 1.750000 & -0.250000 \end{bmatrix}$
answer48	$\begin{bmatrix} -0.250000 & 0.250000 \\ 0.107143 & 0.035714 \end{bmatrix}$
answer49	$\begin{bmatrix} -0.166667 & -0.100000 \\ -0.166667 & 0.100000 \end{bmatrix}$
answer50	$\begin{bmatrix} -0.100000 & -0.400000 \\ -0.300000 & -0.200000 \end{bmatrix}$
answer51	$\begin{bmatrix} 3.000000 & -22.000000 & 6.000000 \\ 1.000000 & -7.000000 & 2.000000 \\ -7.000000 & 52.500000 & -14.500000 \end{bmatrix}$
answer52	$\begin{bmatrix} 0.020619 & -0.123711 & 0.113402 \\ -0.206186 & 0.237113 & -0.134021 \\ -0.025773 & 0.154639 & 0.108247 \end{bmatrix}$
answer53	$\begin{bmatrix} 0.027523 & 0.073394 & -0.102752 \\ 0.073394 & -0.137615 & -0.007339 \\ -0.100917 & 0.064220 & -0.089908 \end{bmatrix}$

answer54			
ans were r	[-0.067227]	0.058824	-0.075630
	-0.394958	-0.529412	0.680672
	0.226891	0.176471	-0.369748
answer55	L		_
answeroo	[-0.185714]	0.209524	-0.214286
	0.242857	-0.504762	0.357143
	0.242857 0.071429	0.047619	-0.071429
	L 0.011123	0.011010	0.011120]
answer56	Γ ο οοοοοο	0.691570	1 401059 ]
	$\begin{bmatrix} -2.000000 \\ 1.000000 \end{bmatrix}$	-0.631579	1.421053
	-1.000000	-0.368421	0.578947
	2.500000	0.736842	-1.657895
answer57	_		_
	-0.048193	-0.188755	0.018072
	-0.108434	-0.008032	-0.084337
	0.096386	0.044177	-0.036145
answer58			_
answeree	[-0.115942]	0.036232	-0.108696
	$\begin{bmatrix} -0.115942 \\ -0.463768 \end{bmatrix}$	-0.355072	0.065217
	-0.130435	-0.021739	0.065217
<b>T</b> 0	L		
answer59	[-0.046460]	-0.037611	0.059735 ]
	-0.040400 $-0.035398$	-0.037011 $-0.123894$	-0.097345
	$\begin{bmatrix} -0.033398 \\ -0.061947 \end{bmatrix}$	-0.123694 $0.283186$	0.079646
	[-0.001947	0.265160	0.079040 ]
answer60	F 0 4 × 0 0 0 0	0 000105	
	0.153680	0.002165	-0.034632
	-0.158009	0.054113	0.134199
	[-0.071429]	-0.071429	0.142857
answer61			
	[-0.104418]	0.120482	-0.020080
	-0.058233	-0.048193	0.008032
	-0.060241	-0.084337	0.180723
answer62	_		_
allswel 02	[0.092593]	-0.160494	0.141975
	0.032407	-0.172840	0.066358
	0.046296	0.086420	-0.095679
22	L		
answer63	Γ_0 221503	-0.034974	-0.161917
	$\begin{bmatrix} -0.221503 \\ -0.044041 \end{bmatrix}$	-0.054574 $-0.059585$	-0.101917 -0.090674
	$\begin{bmatrix} -0.044041 \\ -0.093264 \end{bmatrix}$		-0.030074 -0.015544
	L-0.093204	-0.067358	-0.015544
answer64	Г остаса	0.000000	0.4.4.0.4.7
	-0.046099		-0.141844
	-0.069740	0.068558	-0.009456
	0.043735	0.075650	-0.044917

answer65	Γ 0 0 40000	0.150000	0.0400007
	$\begin{bmatrix} -0.040000 \\ -0.080000 \\ -0.192000 \end{bmatrix}$	0.173333	-0.040000
	-0.080000	0.013333	-0.080000
	$\lfloor -0.192000$	0.232000	0.008000
answer66	F 0.00=001	0.000000	0.050040.7
	-0.067901	-0.003086	0.058642
	$\begin{bmatrix} -0.067901 \\ -0.086420 \\ -0.072016 \end{bmatrix}$	-0.049383	-0.061728
	[-0.072016]	-0.124486	0.031893
answer67	F 0 0 = 1 + 0	0.4.400	4 4 400 <b>~~</b> 7
	-0.357143	0.142857	-1.142857
	$\begin{bmatrix} -0.357143 \\ -0.857143 \\ 0.500000 \end{bmatrix}$	0.142857	-2.142857
	[ 0.500000	-0.000000	1.500000
answer68	F 0 0=0=10	0.00000=	o o 4 <b>=</b> 0 447
	$\begin{bmatrix} -0.078740 \\ -0.118110 \\ 0.070866 \end{bmatrix}$	-0.060367	0.047244
	-0.118110	0.076115	0.070866
	0.070866	0.020997	0.157480
answer69	Г 0 110000	0.005054	0.040==07
	-0.116883	0.025974	-0.246753
	$\begin{bmatrix} -0.116883 \\ -0.168831 \\ 0.064935 \end{bmatrix}$	0.259740	-0.467532
	0.064935	-0.292208	0.525974
answer70	F 0.045445	0.000040	0.050000]
	-0.047445	-0.069343	0.072080
	$\begin{bmatrix} -0.047445 \\ 0.007299 \\ 0.080292 \end{bmatrix}$	0.087591	0.027372
	[ 0.080292	-0.036496	0.051095
answer71	F 0 100501	0.1.40100	0.104450 7
	0.169521	0.142123	0.104452
	$\begin{bmatrix} -0.053082 \\ 0.030822 \end{bmatrix}$	0.056507	-0.042808
	0.030822	-0.065068	-0.071918
answer72	Г		
	-0.206897	0.241379	0.137931
	-0.142241	7 0.241379 1 0.353448 3 0.189655	0.219828
	[-0.198276]	0.189655	0.215517
answer73	Г 1 000000	0.00000	
	-1.000000	0.000000	0.0000000
	-1.047619	-0.214286	0.119048
	0.476190	0.142857	-0.190476
answer74	F 0 05-0	0.00.1000	0.004.1==7
	0.057377	-0.004098	-0.061475
	-0.032787	-0.126230	0.106557
	$\lfloor -0.049180$	0.060656	-0.090164
answer75	Fo. 0.000000	0.400.440	0.004/00.7
	0.068966	0.103448	0.034483
	1	-0.344828	-0.448276
	[0.057471]	0.030651	0.084291

answer76			
ans wer to	[-0.120253]	-0.107595	0.177215
	$\begin{bmatrix} -0.120253 \\ -0.044304 \end{bmatrix}$	0.170886	0.012658
	0.265823	-0.025316	-0.075949
	L		_
answer77	Γ ο 200000	0.000000	0.200000 7
	0.200000	-0.142857	1.428571
	$\begin{bmatrix} -0.200000 \\ -0.428571 \\ 0.228571 \end{bmatrix}$	-0.142857 $0.142857$	$\begin{bmatrix} 1.426571 \\ -0.228571 \end{bmatrix}$
	0.220071	0.142637	-0.226371]
answer78	Г		
	0.127273	-0.236364	0.054545
	$\begin{bmatrix} -0.981818 \\ 0.572727 \end{bmatrix}$	1.109091	-0.563636
	[ 0.572727	-0.563636	0.245455
answer79			
	$\begin{bmatrix} -0.151316 \\ -0.111842 \\ 0.171052 \end{bmatrix}$	0.015351	0.019737
	-0.111842	0.054825	-0.072368
	0.171053	-0.162281	-0.065789
	L		_
answer80	0.314578	0.115090	0.120205
	0.179028	-0.007673	0.125320
	$\begin{bmatrix} 0.173028 \\ -0.230179 \end{bmatrix}$	-0.132992	-0.161125
	0.230173	0.102332	0.101120]
answer81	F 0.00551.4	0.01.4004	0.1050007
	-0.035714	0.214286	0.125000
	$\begin{bmatrix} -0.035714 \\ 0.285714 \end{bmatrix}$	0.285714	0.500000
	0.464286	0.214286	0.875000
answer82			
	[-0.118421	-0.092105	0.118421
	$\begin{bmatrix} -0.118421 \\ 0.089181 \\ -0.002924 \end{bmatrix}$	0.057018	-0.200292
	-0.002924	0.096491	-0.108187
answer83	_		_
answeroo	[-0.250000]	-0.625000	0.515625
	-0.250000	-0.125000	0.078125
	$\begin{bmatrix} -0.250000 \\ -0.250000 \\ 0.000000 \end{bmatrix}$	-0.500000	0.562500
	_ 0.000000	0.000000	0.002000]
answer84	Γ 0 00 4971	0.104905	0.077015 7
	-0.094371		0.077815
	0.069536	-0.182119	-0.215232
	0.052980	0.099338	0.026490
answer 85	_		_
	-0.343750	-0.148438	0.125000
	0.093750	-0.164062	-0.125000
	0.093750	0.085938	-0.125000
answer86	_		_
a112 MC1 00	0.052257	-0.068884	0.100950
	0.092637	0.014252	0.065321
	-0.083135	0.064133	0.043943
	L 0.000100	3.001130	0.010010]

answer87				
ans were t	[0.954023]	0.436782	0.126437	
	-0.747126	-0.402299	-0.195402	
	0.057471	-0.402299 $-0.045977$	0.091954	
a.m.a.m.0.0	L			
answer88	Γ 0 247557	-0.009772	-0.166124	
	-0.260586	-0.009772 $-0.042345$	0.280130	
	-0.276873	-0.107492	0.172638	
	L 0.270073	0.107432	0.172030	
answer89	[-0.075000]	0.025000	0.100000]	
	-0.075000 $-0.2333333$	0.025000	$\begin{bmatrix} -0.100000 \\ 0.466667 \end{bmatrix}$	
		0.633333	0.466667	
	$\lfloor -0.041667$	-0.208333	-0.166667	
answer90	F			
	0.062500	-0.020833	0.104167	
	0.343750	-0.031250 $-0.125000$	-0.093750	
	[-0.125000]	-0.125000	0.125000	
answer91				
	[-0.133333]	-0.183333	-0.050000	
	0.066667	-0.033333 $-0.316667$	-0.100000	
	-0.066667	-0.316667	-0.050000	
answer92	L		_	
answer92	$\Gamma = 5.625000$	-3.125000	-6.750000	
	3 375000	1.875000	4.250000	
	5.875000	3.375000	7.250000	
0.0	_ 0.010000	0.010000	1.290000 ]	
answer93	Γ 0.102774	0.058491	-0.101887	
			$\begin{bmatrix} -0.101887 \\ -0.016981 \end{bmatrix}$	
	0.000038	-0.073585		
	[-0.094340]	-0.037736	-0.047170	
answer94	F			
		-2.218750		
	-0.250000		0.250000	
	1.937500	-2.187500	-1.187500	
answer95				
F 000=1000=1=1			2422 00000	120110002220010222000007
-900719925474		120095990063		1501199875790165.500000
1801439850948			64264.500000	-3002399751580330.500000
$\lfloor -5404319552844 \rfloor$	4594.000000 7	720575940379	02793.000000	9007199254740992.000000 ]
answer96				
answerso	[-0.011905]	0.123016	-0.107143	
	0.166667	-0.055556	-0.000000	
	-0.059524	-0.051587	-0.035714	
a <del>-</del>	L 0.000024	0.001001	0.000111	
answer97	[-0.135593]	-0.050847	-0.011299	
	$ \begin{array}{r rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	-0.050847 $0.118644$	$0.099812 \\ 0.026365$	
	L-0.010949	0.110044	0.020309 ]	

answer98	Γ_0.15		210526 <u>-</u> 1.0	52632]
	$\begin{bmatrix} -0.15 \\ -0.05 \end{bmatrix}$	$     \begin{array}{rrr}       67895 & -0.2 \\       62632 & 0.26 \\       05263 & -0.4      \end{array} $	3158 - 1.0	.5789
	-0.10	05263 -0.4	73684 - 1.8	68421
answer99	<b>L</b>			_
	0.081	1081 -0.5	667568 -1.5	13514
	-0.18	$     \begin{array}{rrr}       1081 & -0.5 \\       39189 & 0.32 \\       3243 & -0.7     \end{array} $	24324 0.86	34865
	[ 0.243	3243 -0.7	02703 - 1.5	40541
answer100	Γn 8	00000 2.30	00000 3.0000	Loon
				I
	2.2	00000 5.90 00000 5.20	00000 7.0000	I
answer101	L			_
	[9.200000	8.407143	2.350000 -	-1.750000]
	6.800000	6.164286		-1.250000
		0.964286		-0.250000
	5.800000	5.342857	1.400000 -	-1.000000
answer102	_			-
ans wer 10 <b>2</b>	0.125000	-0.093750	0.031250	-0.125000
	-0.125000	-0.093730 $-0.047238$	0.031230 $0.124273$	-0.125000 $-0.218023$
	-0.095930 $0.014535$	0.117006	0.015262	0.078488
	0.043605	0.101017	-0.204215	0.235465
answer103	_			-
answerroo	Γο 147050	-0.529412	-0.147059	0.441176
	0.147059	-0.529412 0.238562	-0.147059 $0.012255$	-0.441176 $0.231209$
	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	-0.189542	0.012233 $0.024510$	-0.204248
	-0.392157	1.078431	0.058824	0.843137
answer104	L			=
answer 104	F 0.075040	0.104557	0.100079	0.100500
	0.075949	-0.164557 $0.120253$	-0.189873 $0.177215$	0.126582 $-0.284810$
	$\begin{bmatrix} -0.170880 \\ -0.210970 \end{bmatrix}$	0.120253 $0.345992$	-0.139241	-0.284810 $0.092827$
	$\begin{bmatrix} -0.170886 \\ -0.210970 \\ 0.358650 \end{bmatrix}$	-0.388186	-0.063291	0.042194
answer105		0.000=00	0.000_0_	
answeriub	Γοροφίος	0 5 100 11	0.000000	0.040=00
	0.902439			
	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	-0.473171 $0.604878$	-0.200000 $0.400000$	-0.824390 $0.868293$
	1.597561	1.053659	0.400000 $0.600000$	1.351220
100	[ 1.557501	1.000000	0.000000	1.001220
answer106	_			_
	0.098947	0.049263	-0.106947	-0.101053
	0.026316	0.068421	0.073684	0.026316
	0.089474 0.005263	-0.087368 $0.053684$	-0.109474 $-0.065263$	$0.089474 \ 0.005263$
	L0.009209	0.000004	0.000200	0.000200

# ${\bf answer 107}$

-0.174141	-0.160720	0.221277	-0.168576
0.053682	0.139771	-0.165957	-0.008183
-0.188871	-0.119804	0.285106	-0.135843
0.135843	0.067103	-0.255319	0.253682

# answer108

0.513514	0.114543	0.312741	0.537967
0.229730	0.137709	0.173745	0.169241
0.027027	-0.009009	0.054054	0.171171
0.364865	0.140283	0.158301	0.406049

# answer 109

-0.018634	-0.053830	0.045549	-0.068323
-0.166322	0.198528	0.011502	-0.239476
0.118012	-0.103520	-0.066253	0.099379
0.015183	-0.153669	-0.049459	0.129745

# ${\bf answer 110}$

-0.079661	0.257627	-0.205085	0.049153
0.063729	-0.006102	-0.035932	-0.039322
0.121356	0.190508	-0.100339	0.116610
0.027119	0.210169	-0.206780	0.132203

# answer111

	-0.224080	0.418060	0.128763	-0.056856
	0.054627	-0.124303	-0.102285	-0.028428
	-0.073579	0.055184	-0.051003	0.048495
ı	0.138239	-0.437012	-0.146600	0.030100

# answer112

-0.140679	0.075258	0.047221	0.079193
-0.097885	0.069848	0.200689	0.086572
0.031972	-0.153468	0.080177	-0.063453
-0.082145	0.194294	-0.329070	-0.083128

# answer113

0.003894	0.048287	0.060748	0.042835
-0.140576	0.056854	0.007009	-0.046340
0.047638	0.057373	-0.056854	0.024013
0.040109	0.097352	0.025701	-0.058801

0.224138	-0.327586	-0.465517	0.275862
0.603448	-0.189655	-0.637931	0.896552
-0.534483	0.396552	0.879310	-0.965517
0.806034	-0.581897	-1.366379	1.318966

[-0.060411]	-0.063839	0.106255	-0.046701
-0.152956	0.072408	0.013710	-0.054413
0.048843	-0.044130	-0.117823	-0.079263
0.068123	-0.030848	0.068123	-0.035990

# answer116

0.148368	0.080119	0.008902	-0.112760
0.108521	-0.015685	-0.033489	-0.099618
0.266638	-0.167444	0.155998	0.071641
0.017380	-0.022043	0.061043	-0.058923

# ${\bf answer 117}$

-0.441315	-0.009390	-0.049296	0.077465
0.051643	-0.059691	0.079477	-0.043260
0.154930	-0.036217	-0.047284	0.013078
0.633803	-0.044266	0.053320	-0.206237

# ${\bf answer 118}$

0.126148	0.029242	-0.043523	-0.136688
-0.085345	-0.100646	-0.059504	0.109997
-0.097586	-0.079225	0.071404	0.068004
0.127508	0.026862	0.053043	-0.020911

# answer119

-0.686461	-0.166271	-0.237530	0.242280
-0.699762	-0.238005	-0.197150	0.141093
0.619002	0.159620	0.228029	-0.112589
0.303563	0.029929	0.042755	-0.083610

# answer 120

-0.048996	-0.008105	-0.057653	0.033800
0.018235	-0.064653	0.062811	-0.014459
0.126358	-0.084362	-0.009210	-0.034537
-0.054890	0.103702	0.033155	0.124332

# ${\bf answer 121}$

3.977778	4.866667	2.022222	2.511111
2.688889	3.133333	1.311111	1.655556
-3.955556	-4.733333	-2.044444	-2.522222
-4.277778	-5.166667	-2.222222	-2.611111

0.529018	0.101563	0.177455	0.194196
0.285714	-0.000000	0.285714	0.142857
-0.107143	0.125000	-0.232143	-0.178571
-0.151786	-0.031250	-0.120536	-0.169643

# ${\bf answer 123}$

-0.147436	-1.250000	1.256410	0.057692
0.666667	7.000000	-7.333333	0.000000
0.307692	3.000000	-3.230769	-0.076923
-0.358974	-3.000000	3.102564	-0.076923

# ${\bf answer 124}$

-0.364706	0.141176	0.741176	0.294118
-0.141176	0.035294	-0.164706	0.223529
0.258824	-0.164706	-0.364706	-0.176471
-0.435294	0.258824	0.658824	0.505882

# ${\bf answer 125}$

-0.431267	0.388140	-0.094340	0.207547
1.123989	-0.711590	0.339623	-0.547170
-0.026954	0.024259	0.056604	0.075472
0.142857	0.071429	0.000000	0.000000

# ${\bf answer 126}$

-0.030550	0.148633	-0.066370	-0.066206
-0.066123	0.006341	0.012681	-0.054348
0.023386	0.010211	-0.070487	-0.035573
0.077487	-0.085886	0.100955	0.008893

# answer 127

-0.057461	0.099033	0.177810	0.021184
-0.012975	0.234344	0.284390	0.055475
-0.025023	0.084602	0.038263	-0.046074
-0.069509			0.062492

# answer 128

-0.068475	0.048457	0.028251	-0.059495
0.072591	0.068849	0.024696	-0.018896
0.088120	0.011413	-0.093732	-0.087371
0.037792	0.077081	-0.059308	0.098410

# ${\bf answer 129}$

0.027479	0.066906	-0.002389	0.103943
0.303465	-0.087216	-0.461171	0.060932
0.088411	0.084827	-0.181601	-0.100358
0.217443	0.181601	-0.149343	-0.003584

-0.024814	-0.073537	-0.049085	0.038399
-0.031471	0.069145	-0.014807	-0.015169
-0.040618	-0.027305	0.025494	-0.041161
0.050580	-0.016166	-0.049583	-0.069145

-0.494094	0.412402	-0.194882	-0.632874
0.372047	-0.268701	0.222441	0.378937
-0.281496	0.258858	-0.210630	-0.416339
0.295276	-0.379921	0.255906	0.356299

# answer 132

0.155063	0.076266	-0.069304	-0.066139
0.012658	0.053165	-0.060759	0.072152
-0.085443	0.066139	0.085127	0.062975
0.085443	0.033861	0.014873	0.037025

# answer 133

-0.115108	0.169784	0.089209	-0.044604
0.071942	-0.856115	0.194245	0.402878
0.014388	0.828777	-0.361151	-0.319424
0.079137	0.158273	-0.086331	0.043165

# ${\bf answer 134}$

-0.071429	-0.071429	0.071429	-0.000000
-0.002149	-0.143353	0.048446	0.076389
0.005291	-0.031746	-0.042328	-0.111111
-0.079696	-0.084325	-0.049934	-0.013889

# answer 135

I	-0.208333	0.180556	0.210470	0.290598
	0.083333	-0.138889	-0.232906	-0.341880
	-0.208333	0.180556	0.287393	0.752137
ı	0.083333	-0.138889	-0.079060	-0.418803

# answer136

0.078772	-0.072634	-0.000512	-0.059079
0.026598	0.040409	0.077749	-0.019949
-0.001279	0.007673	-0.042199	-0.124041
-0.101535	0.009207	0.049361	-0.048849

# answer 137

0.036913	0.350911	-0.191275	0.061841
0.221477	0.248322	-0.147651	0.228188
0.020134	0.152445	-0.013423	-0.018217
0.181208	0.086290	-0.120805	0.121764

l	0.123364	0.188785	0.018692	-0.013084
l	-0.266355	-0.112150	0.186916	-0.130841
l	-0.010280	-0.099065	-0.168224	-0.082243
l	0.268224	0.039252	-0.065421	0.145794

-0.010526	0.070175	-0.066667	0.033333
-0.147368	-0.017544	0.066667	-0.033333
0.002632	0.232456	0.016667	-0.258333
0.107895	-0.135965	0.016667	0.241667

# ${\bf answer 140}$

-0.025466	-0.074193	-0.040104	-0.005214
-0.158813	0.049128	0.080610	0.030479
0.198917	-0.011029	-0.222178	-0.108883
0.102667	-0.102466	-0.082414	-0.120714

# ${\bf answer 141}$

[-0.003722]	-0.106811	0.214738	-0.394492
-0.003349	-0.196130	0.293264	-0.355043
-0.069967	-0.208039	0.237067	-0.416450
-0.037588	0.021213	0.068850	0.015631

### answer 142

-0.001552	-0.019395	-0.062839	-0.166796
-0.260667	-0.258340	-0.557021	-0.021722
-0.335144	-0.189294	-0.573313	-0.027929
0.041117	0.013964	0.165244	-0.079907

# answer 143

0.126649	-0.277045	0.079156	0.034301
0.261214	-0.217238	-0.128408	-0.033421
-0.184697	0.029024	0.134565	0.158311
0.145119	-0.379947	-0.034301	0.018470

# answer144

#### answer145

-0.011976	0.329341	0.071856	-0.293413
-0.017964	-0.005988	0.107784	0.059880
-0.299401	0.233533	-0.203593	-0.335329
-0.087425	0.104192	-0.075449	-0.241916

0.022561	-0.103253	0.038478	0.065052
0.047612	-0.003183	0.105744	0.063668
0.159308	-0.054256	0.063114	0.085121
0.014394	-0.047474	0.055225	-0.050519

0.114332	-0.078905	0.143317	0.082126
0.138084	-0.063607	-0.119163	-0.020531
0.030998	0.087762	-0.190016	-0.167874
-0.150966	0.157005	-0.009662	0.025362

# ${\bf answer 148}$

[-0.031119]	-0.050630	-0.019758	0.041245
-0.061744	0.296369	-0.055075	0.002470
0.049148	0.064090	-0.048160	0.038034
-0.061250	0.193999	-0.070635	-0.077550

# ${\bf answer 149}$

[-0.071097]	-0.051032	-0.039318	-0.028068
-0.006495	0.000232	0.070633	-0.049872
0.052192	-0.037578	0.057411	0.079332
-0.065298	0.055904	0.022617	-0.019253

# answer150

0.050196	-0.347451	0.235294	0.032941
-0.197647	0.430588	-0.176471	-0.004706
-0.001569	-0.020392	0.117647	-0.063529
-0.212549	0.236863	-0.058824	-0.108235

# 3 Matrix Determinant

answer1

-19

answer2

-88

answer3

15

answer4

-24

answer5

-13

 ${\bf answer 6}$ 

0

 ${\bf answer7}$ 

36

answer8	74
answer9	17
answer10	9
answer11	34
answer12	-22
answer13	4
answer14	-22
answer15	-77
answer16	0
answer17	<b>-</b> 7
answer18	-32
answer19	-23
answer20	37
answer21	2
answer22	29
answer23	-11
answer24	-46
answer25	-127

answer26	-34
answer27	72
answer28	76
answer29	-28
answer30	7
answer31	70
answer32	34
answer33	-29
answer34	-74
answer35	-18
answer36	-6
answer37	24
answer38	103
answer39	99
answer40	17
answer41	-15
answer42	-56
answer43	30

-40

answer44	-97
answer45	-23
answer46	-3
answer47	6
answer48	-40
answer49	4
answer50	21
answer51	528
answer52	-108
answer 53	-88
answer54	-318
answer55	154
answer56	-731
answer57	677
answer58	366
answer59	172
answer60	216
answer61	12

answer62	-28
answer63	-63
answer64	410
answer65	-236
answer66	267
answer67	353
answer68	-625
answer69	-49
answer70	26
answer71	-110
answer72	-1335
answer73	70
answer74	-455
answer75	728
answer76	149
answer77	551
answer78	-130
answer79	-137

answer80	24
answer81	-780
answer82	-503
answer83	1465
answer84	-293
answer85	-17
answer86	-149
answer87	-575
answer88	-1133
answer89	99
answer90	-1263
answer91	-212
answer92	-292
answer93	-152
answer94	<b>-</b> 979
answer95	46
answer96	77
answer97	

-436

answer98	-422
answer99	427
answer100	-1140
answer101	8375
answer102	-4811
answer103	2820
answer104	-610
answer105	3774
answer106	11456
answer107	447
answer108	2692
answer109	-4
answer110	5784
answer111	-897
answer112	-1604
answer113	-6225
answer114	-256
answer115	115
	-

answer116	
answer117	-6836
answertti	-813
answer118	8476
answer119	5867
answer120	-2936
answer121	-2930
answer122	768
answei 122	-720
answer123	77
answer124	528
answer125	-4810
answer126	
answer127	-6389
100	830
answer128	1186
answer129	7759
answer130	-5996
answer131	
answer132	3362
	-1885
answer133	-669

answer134	365
answer135	-3331
answer136	-1756
answer137	892
answer138	-4679
answer139	2511
answer140	4159
answer141	-1910
answer142	1895
answer143	5599
answer144	903
answer145	1490
answer146	-3011
answer147	-3011 5954
answer148	
answer149	-559
answer150	4088
	-262