

# 代数学幾何学 (A/B) 計算演習 [問題] (2009/06/18)

問. 次の行列  $A$  の対角成分 (Trace: トレース)  $\text{tr}A$  を求めよ

Q.1

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

Q.7

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

Q.13

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

Q.2

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

Q.8

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

Q.14

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

Q.3

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

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

Q.15

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

Q.4

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

Q.10

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

Q.16

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

Q.5

$$A = \begin{pmatrix} -2 & -8 & -4 \\ -6 & 2 & 4 \\ 1 & -1 & 7 \end{pmatrix}$$

Q.11

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

Q.17

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

Q.6

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

Q.12

$$A = \begin{pmatrix} 2 & 8 & -7 \\ -9 & -5 & 5 \\ 0 & -8 & -8 \end{pmatrix}$$

代数学幾何学 (A/B) 計算演習 [解答] (2009/06/18)

A.1	A.7	A.13
-29	12	0
A.2	A.8	A.14
-12	14	-20
A.3	A.9	A.15
-5	-13	A.16
A.4	A.10	3
-7	-16	A.17
A.5	A.11	-6
7	22	
A.6	A.12	
-2	-11	-25