

代幾 I 計算演習 [問題] (2006/06/29)

問.

Q.1

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

Q.7

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

Q.2

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

Q.8

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

Q.3

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

Q.9

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

Q.4

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

Q.10

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

Q.5

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

Q.11

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

Q.6

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

Q.12

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

代幾 I 計算演習 [解答] (2006/06/29)

A.1

$$\begin{aligned} &= \begin{vmatrix} 2 & 1 & -3 \\ -1 & -3 & 1 \\ 2 & -1 & -2 \end{vmatrix} \\ &= -7 \end{aligned}$$

A.2

$$\begin{aligned} &= \begin{vmatrix} 1 & -1 & -2 \\ -1 & 0 & 2 \\ -3 & 3 & 2 \end{vmatrix} \\ &= 4 \end{aligned}$$

A.3

$$\begin{aligned} &= \begin{vmatrix} -2 & 3 & 2 \\ -1 & -3 & 2 \\ -2 & -3 & 1 \end{vmatrix} \\ &= -21 \end{aligned}$$

A.4

$$\begin{aligned} &= \begin{vmatrix} -3 & 3 & 0 \\ -1 & -2 & 3 \\ -1 & 3 & -2 \end{vmatrix} \\ &= 0 \end{aligned}$$

A.5

$$\begin{aligned} &= \begin{vmatrix} 0 & -2 & -3 \\ 1 & -2 & 3 \\ -1 & -1 & -2 \end{vmatrix} \\ &= 11 \end{aligned}$$

A.6

$$\begin{aligned} &= \begin{vmatrix} 0 & -2 & 3 \\ -3 & -2 & 1 \\ 2 & 3 & -1 \end{vmatrix} \\ &= -13 \end{aligned}$$

A.7

$$\begin{aligned} &= \begin{vmatrix} 3 & -3 & 3 \\ 3 & -3 & 1 \\ -1 & -1 & -3 \end{vmatrix} \\ &= -12 \end{aligned}$$

A.8

$$\begin{aligned} &= \begin{vmatrix} -3 & 0 & 2 \\ 2 & 0 & -1 \\ 2 & -1 & -2 \end{vmatrix} \\ &= -1 \end{aligned}$$

A.9

$$\begin{aligned} &= \begin{vmatrix} 3 & -3 & 0 \\ -3 & 3 & 1 \\ 3 & 3 & -2 \end{vmatrix} \\ &= -18 \end{aligned}$$

A.10

$$\begin{aligned} &= \begin{vmatrix} -2 & 1 & -2 \\ 0 & 0 & 1 \\ -1 & 3 & -2 \end{vmatrix} \\ &= 5 \end{aligned}$$

A.11

$$\begin{aligned} &= \begin{vmatrix} -2 & -3 & 3 \\ 1 & -2 & 1 \\ -2 & 0 & -3 \end{vmatrix} \\ &= -27 \end{aligned}$$

A.12

$$\begin{aligned} &= \begin{vmatrix} -3 & 0 & -1 \\ -1 & 0 & -2 \\ 0 & -1 & 2 \end{vmatrix} \\ &= 5 \end{aligned}$$