代数学幾何学 (A/B) 計算演習 [問題] (2009/10/15)

問. 次の置換 σ の符号 ($\operatorname{sgn}\sigma$) を求めなさい

Q.1

$$\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 \\ 2 & 3 & 5 & 4 & 1 \end{pmatrix}$$

Q.2

$$\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 \\ 4 & 6 & 2 & 3 & 1 & 5 \end{pmatrix}$$

Q.3

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

Q.4

$$\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 \\ 3 & 1 & 2 & 5 & 4 \end{pmatrix}$$

Q.5

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

Q.6

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

Q.7

$$\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ 3 & 7 & 5 & 1 & 6 & 2 & 4 \end{pmatrix}$$

Q.8

$$\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ 3 & 1 & 7 & 5 & 6 & 2 & 4 \end{pmatrix}$$

Q.9

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

Q.10

$$\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 \\ 3 & 1 & 2 & 4 & 5 & 6 \end{pmatrix}$$

Q.11

$$\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 \\ 1 & 3 & 2 & 5 & 4 \end{pmatrix}$$

Q.12

$$\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ 6 & 1 & 3 & 2 & 5 & 4 & 7 \end{pmatrix}$$

Q.13

$$\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 \\ 3 & 2 & 1 & 5 & 4 \end{pmatrix}$$

Q.14

$$\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ 3 & 5 & 6 & 4 & 7 & 1 & 2 \end{pmatrix}$$

Q.15

$$\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 \\ 3 & 1 & 4 & 5 & 2 \end{pmatrix}$$

Q.16

$$\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 \\ 4 & 5 & 1 & 6 & 2 & 3 \end{pmatrix}$$

Q.17

$$\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 \\ 1 & 4 & 2 & 3 & 5 \end{pmatrix}$$

Q.18

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

代数学幾何学 (A/B) 計算演習 [解答] (2009/10/15)

A.1

$$\operatorname{sgn}\sigma = -1$$

A.2

$$\operatorname{sgn}\sigma = -1$$

A.3

$$\operatorname{sgn}\sigma = +1$$

A.4

$$\operatorname{sgn}\sigma = -1$$

A.5

$$\operatorname{sgn}\sigma = +1$$

A.6

$$\operatorname{sgn}\sigma = +1$$

A.7

$$\operatorname{sgn}\sigma = +1$$

A.8

$$\operatorname{sgn}\sigma = +1$$

A.9

$$\operatorname{sgn}\sigma = -1$$

A.10

$$\operatorname{sgn}\sigma = +1$$

A.11

$$\operatorname{sgn}\sigma = +1$$

A.12

$$\operatorname{sgn}\sigma = -1$$

A.13

$$\operatorname{sgn}\sigma = +1$$

A.14

$$\operatorname{sgn}\sigma = +1$$

A.15

$$\operatorname{sgn}\sigma = +1$$

A.16

$$\operatorname{sgn}\sigma = +1$$

A.17

$$\operatorname{sgn}\sigma = +1$$

A.18

$$\operatorname{sgn}\sigma = +1$$