

解答

1. (1) 9 (2) 3
 2. (1) -9 (2) -28
 3. (1) 3 (2) 10
 4. (1) 39 (2) 20

解説

1. (1) $\begin{vmatrix} 5 & 7 \\ 3 & 6 \end{vmatrix} = 5 \times 6 - 7 \times 3 = 9$

(2) $\begin{vmatrix} 2 & -3 \\ 1 & 0 \end{vmatrix} = 2 \times 0 - (-3) \times 1 = 3$

2. (1) $\begin{vmatrix} 2 & 1 & 3 \\ 1 & 2 & 0 \\ 3 & 1 & 2 \end{vmatrix} = 2 \times 2 \times 2 + 1 \times 0 \times 3 + 3 \times 1 \times 1 - 2 \times 0 \times 1 - 1 \times 1 \times 2 - 3 \times 2 \times 3 = -9$

(2) $\begin{vmatrix} 1 & -3 & 4 \\ 2 & 0 & 3 \\ 5 & 1 & 2 \end{vmatrix} = 1 \times 0 \times 2 + (-3) \times 3 \times 5 + 4 \times 2 \times 1 - 1 \times 3 \times 1 - (-3) \times 2 \times 2 - 4 \times 0 \times 5 = -28$

3. (1) $\begin{vmatrix} 3 & 2 & 5 \\ 0 & 7 & 3 \\ 0 & 2 & 1 \end{vmatrix} \begin{matrix} \text{教科書} \\ 91 \text{ ページ} \\ \text{例題 3} \end{matrix} 3 \begin{vmatrix} 7 & 3 \\ 2 & 1 \end{vmatrix} = 3(7 \times 1 - 3 \times 2) = 3$

(2) $\begin{vmatrix} 5 & 3 & 1 & 7 \\ 0 & 2 & 3 & 1 \\ 0 & 0 & 2 & 5 \\ 0 & 0 & 1 & 3 \end{vmatrix} \begin{matrix} \text{教科書} \\ 91 \text{ ページ} \\ \text{例題 3} \end{matrix} 5 \begin{vmatrix} 2 & 3 & 1 \\ 0 & 2 & 5 \\ 0 & 1 & 3 \end{vmatrix} \begin{matrix} \text{教科書} \\ 91 \text{ ページ} \\ \text{例題 3} \end{matrix} 5 \times 2 \begin{vmatrix} 2 & 5 \\ 1 & 3 \end{vmatrix} = 10(2 \times 3 - 5 \times 1) = 10$

4. (1) $\begin{vmatrix} 3 & 2 & 7 \\ 0 & 5 & 2 \\ 0 & 1 & 3 \end{vmatrix} \begin{matrix} \text{教科書} \\ 91 \text{ ページ} \\ \text{例題 3} \end{matrix} 3 \begin{vmatrix} 5 & 2 \\ 1 & 3 \end{vmatrix} = 3(5 \times 3 - 2 \times 1) = 39$

(2) $\begin{vmatrix} 2 & 2 & 3 & 7 \\ 0 & 1 & -3 & 2 \\ 0 & 4 & 2 & 0 \\ 0 & 3 & 1 & 1 \end{vmatrix} \begin{matrix} \text{教科書} \\ 91 \text{ ページ} \\ \text{例題 3} \end{matrix} 2 \begin{vmatrix} 1 & -3 & 2 \\ 4 & 2 & 0 \\ 3 & 1 & 1 \end{vmatrix}$
 $= 2\{1 \times 2 \times 1 + (-3) \times 0 \times 3 + 2 \times 4 \times 1 - 1 \times 0 \times 1 - (-3) \times 4 \times 1 - 2 \times 2 \times 3\}$
 $= 2 \times 10 = 20$