1 以下の行列の積を計算しなさい.

$$(1) \left(\begin{array}{ccc} 1 & 0 & 0 \\ 0 & \frac{1}{2} & 0 \\ 0 & 0 & 1 \end{array}\right) \left(\begin{array}{cccc} 2 & -1 & 5 & -1 \\ 0 & 2 & 2 & 6 \\ 1 & 0 & 3 & 1 \end{array}\right)$$

$$(2) \left(\begin{array}{ccc} 0 & 0 & 1 \\ 0 & 1 & 0 \\ 1 & 0 & 0 \end{array}\right) \left(\begin{array}{cccc} 2 & -1 & 5 & -1 \\ 0 & 2 & 2 & 6 \\ 1 & 0 & 3 & 1 \end{array}\right)$$

$$(3) \left(\begin{array}{ccc} 1 & 0 & -2 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{array}\right) \left(\begin{array}{ccc} 2 & -1 & 5 & -1 \\ 0 & 2 & 2 & 6 \\ 1 & 0 & 3 & 1 \end{array}\right)$$

2 以下の行列の積を計算しなさい.

$$(1) \left(\begin{array}{cccc} 2 & -1 & 5 & -1 \\ 0 & 2 & 2 & 6 \\ 1 & 0 & 3 & 1 \end{array}\right) \left(\begin{array}{cccc} 1 & 0 & 0 & 0 \\ 0 & \frac{1}{2} & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right)$$

$$(2) \left(\begin{array}{cccc} 2 & -1 & 5 & -1 \\ 0 & 2 & 2 & 6 \\ 1 & 0 & 3 & 1 \end{array}\right) \left(\begin{array}{cccc} 0 & 0 & 1 & 0 \\ 0 & 1 & 0 & 0 \\ 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right)$$

$$(3) \left(\begin{array}{cccc} 2 & -1 & 5 & -1 \\ 0 & 2 & 2 & 6 \\ 1 & 0 & 3 & 1 \end{array}\right) \left(\begin{array}{cccc} 1 & 0 & -3 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array}\right)$$