



(a)

$$A = \begin{matrix} & \begin{matrix} \text{red} & \text{orange} & \text{green} & \text{blue} & \text{dark blue} & \text{magenta} \end{matrix} \\ \begin{matrix} \text{red} \\ \text{orange} \\ \text{green} \\ \text{blue} \\ \text{dark blue} \\ \text{magenta} \end{matrix} & \begin{pmatrix} 0 & 1 & 0 & 0 & 0 & 1 \\ 1 & 0 & 1 & 1 & 1 & 1 \\ 0 & 1 & 0 & 1 & 1 & 1 \\ 0 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 0 & 1 \\ 1 & 1 & 1 & 1 & 1 & 0 \end{pmatrix} \end{matrix}$$

(b)

$$k = \begin{matrix} \begin{matrix} \text{red} \\ \text{orange} \\ \text{green} \\ \text{blue} \\ \text{dark blue} \\ \text{magenta} \end{matrix} & \begin{pmatrix} 2 \\ 5 \\ 4 \\ 4 \\ 4 \\ 5 \end{pmatrix} \end{matrix}$$

(c)