

$$1. \begin{bmatrix} 2.25 & 0 & 0 & 2.25 \\ 0 & 2 & 0 & 2 \\ 0 & 0 & 2.25 & 2.25 \\ 0 & 0 & 0 & 1 \end{bmatrix}$$

2. (0, 1, 2), (1, 3, 2), (1, 7, 3), (1, 5, 7), (3, 7, 2), (7, 6, 2), (0, 4, 2), (4, 6, 2), (4, 7, 6), (5, 7, 4), (0, 1, 4), (1, 5, 4)