

$$\begin{aligned}
 25^{-1} &= 40 = 01001101 \\
 &\begin{pmatrix} 1 & 0 & 0 & 0 & 1 & 1 & 1 & 1 \\ 1 & 1 & 0 & 0 & 0 & 1 & 1 & 1 \\ 1 & 1 & 1 & 0 & 0 & 0 & 1 & 1 \\ 1 & 1 & 1 & 1 & 0 & 0 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 & 1 & 1 & 1 & 1 \\ 0 & 0 & 0 & 1 & 1 & 1 & 1 & 1 \end{pmatrix} \begin{pmatrix} 1 \\ 0 \\ -00 \\ -00 \\ -0 \\ 0 \\ 0 \\ 0 \end{pmatrix} = \begin{pmatrix} 00111010 \\ 01111010 \\ 01111010 \\ 01111010 \\ 01111010 \\ 01111010 \\ 01111010 \end{pmatrix} + \begin{pmatrix} 1 \\ -00 \\ -00 \\ -0 \\ 0 \\ 0 \\ 0 \end{pmatrix} = \begin{pmatrix} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \end{pmatrix} = 3F
 \end{aligned}$$