Luku 1

Perspektiivimatriisi

$$
\begin{pmatrix}
\frac{2n}{r-l} & 0 & \frac{r+l}{r-l} & 0 \\
0 & \frac{2n}{t-b} & \frac{t+b}{t-b} & 0 \\
0 & 0 & -\frac{f+n}{f-n} & -\frac{2fn}{f-n} \\
0 & 0 & -1 & 0
\end{pmatrix}
$$

$$
\begin{bmatrix}
\dfrac{2n}{r-l} & 0 & 0 & 0 \\
0 & \dfrac{2n}{t-b} & 0 & 0 \\
\dfrac{r+l}{r-l} & \dfrac{t+b}{t-b} & -\dfrac{f+n}{f-n} & -1 \\
0 & 0 & -\dfrac{2fn}{f-n} & 0
\end{bmatrix}
$$

$$
P =
\begin{pmatrix}
\dfrac{2n}{r-l} & 0 & 0 & 0 \\
0 & \dfrac{2n}{t-b} & 0 & 0 \\
\dfrac{r+l}{r-l} & \dfrac{t+b}{t-b} & -\dfrac{f+n}{f-n} & -1 \\
0 & 0 & -\dfrac{2fn}{f-n} & 0
\end{pmatrix}
$$

$$P = \begin{pmatrix} 2n/r - l & 0 & 0 & 0 \\ 0 & 2n/t - b & 0 & 0 \\ r + l/r - l & t + b/t - b & -f + n/f - n & -1 \\ 0 & 0 & -2fn/f - n & 0 \end{pmatrix}$$