

$$HI = \begin{pmatrix} 1 & -1 & 0 & 0 & 0 \\ -1 & 2 & -1.4142 & 0 & 0 \\ 0 & -1.4142 & 3 & -1.7321 & 0 \\ 0 & 0 & -1.7321 & 4 & -2 \\ 0 & 0 & 0 & -2 & 5 \end{pmatrix}$$

$$HP = \begin{pmatrix} 2 & 0 & 0 & 0 & 0 \\ 0 & 4 & 0 & 0 & 0 \\ 0 & 0 & 5 & 0 & 0 \\ 0 & 0 & 0 & 3 & 0 \\ 0 & 0 & 0 & 0 & 1 \end{pmatrix}$$

