Q1)

$$h * f = g = f * h$$

Q2)

$$g[n, m] = \frac{1}{9} \sum_{k=n-1}^{n+1} \sum_{l=m-1}^{m+1} f[k, l]$$

$$g[n, m] = (f * h)[m, n] = \sum_{kl} f[k, l] h[m - k, n - l] \qquad h = \frac{1}{9} \begin{bmatrix} 1 & 1 & 1 \\ 1 & 1 & 1 \\ 1 & 1 & 1 \end{bmatrix}$$