Q8) $(1 - r - g - b)^2$

$(1 - r - g - b)(1 - r - g - b)$

$= 1 - r - g - b - r + r^2 + rg + rb$

$- g + gr + g^2 + gb - b + br + bg + b^2$

But for binary inputs $x^2 = x$

So,

$= 1 - r - g - b + 2gr + 2gb + 2rb + 2rgb$

↓ Matrix

$$\begin{bmatrix} -1 & 2 & 2 \\ & -1 & 2 \\ & & -1 \end{bmatrix}$$