$$W(A) = \frac{1}{2} \begin{pmatrix} \left(a_1^1 + a_2^1 + a_1^2 + a_2^2\right) & \left(a_1^1 + a_2^1 - a_1^2 - a_2^2\right) \\ \left(a_1^1 - a_2^1 + a_1^2 - a_2^2\right) & \left(a_1^1 - a_2^1 - a_1^2 + a_2^2\right) \end{pmatrix}, \tag{1}$$