Let W be the set of all vectors $\begin{bmatrix} x \\ y \\ x + y \end{bmatrix}$ with x and y real. Find a basis of $W^{\perp}$.

$$\left\{ \begin{bmatrix} \boxed{} \\ \boxed{} \\ \boxed{} \end{bmatrix} \right\}.$$

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$$\left\{ \begin{bmatrix} -1 \\ -1 \\ 1 \end{bmatrix} \right\}.$$