

Two vectors can be represented using the orthonormal basis vectors $|x\rangle$ and $|y\rangle$.

$$|w\rangle = 4i|x\rangle + 2|y\rangle$$

$$|u\rangle = 3|x\rangle + 5e^{i\pi/3}|y\rangle$$

$$\langle w|u\rangle = ?$$

$$\langle u|w\rangle = ?$$