Singular Value Decomposition

In the next section we will be studying the Singular Value Decomposition (https://en.wikipedia.org/wiki/Singular_value_decomposition). Given A, decompose into

$$A = U\Sigma V^T$$

where U and V are *unitary* (https://en.wikipedia.org/wiki/Unitary_matrix) and where Σ is a diagonal matrix of *singular values*. These next two questions should refresh your memory from MATH415.