Problems for Lecture 9

2.

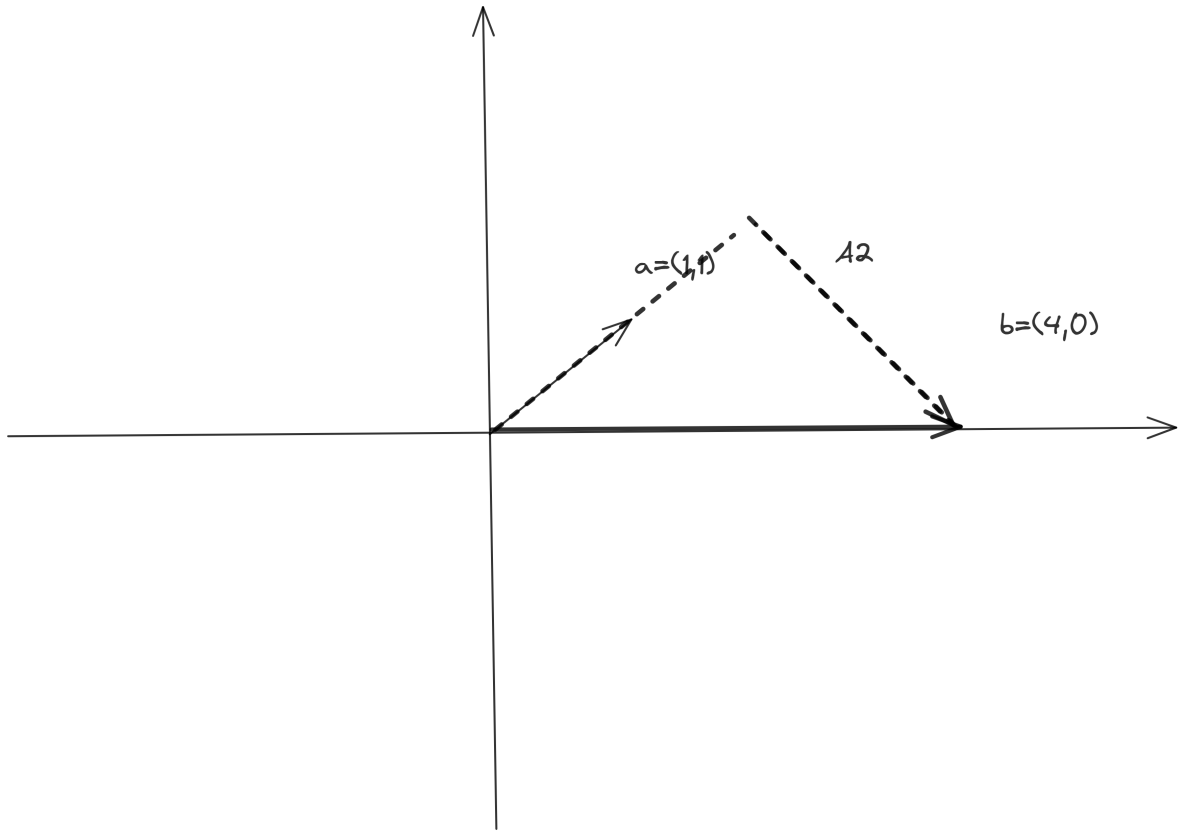
Because A is a linear map from row space to the column space and A^+ is a linear map from column space to row space and $dim(space_{row}) = dim(space_{column})$.

they can't have the same eigenvectors, because the eigenvector must in the subspace of the row space or the column space respectively.

there might a same eigenvalues.

8.

$2a$ should be subtracted from b,



9.$q_1 = [1/\sqrt{2}, 1/\sqrt{2}]^T$, $q_2 = [1/\sqrt{2}, -1/\sqrt{2}]^T$?=$2\sqrt{2}$