

#ref #disorganized #incomplete #hw

1 | Problem 12!

title: the problem

Supposed V is finite-dimensional with $\dim V > 0$ and suppose W is infinite-dimensional. Prove that

the set of all linear maps.. which are just a bunch of transformations like matrices.

we can do.. proof by ~induction?

ie. prove that we can do $T(a_1, a_2, \dots, a_n) = (a_1, a_2, \dots, a_n, 1)$ and therefore, we can extend it to infin and prove that it works

to do so, we need to prove that each linear map is: - associative - homogeneity

no! instead, we can do: $T(a_1, a_1, \dots, a_n) = (a_1, a_2, \dots, a_n, 0_1, 0_2, \dots, 0_\infty)$