Lemma

> Prove that the union of two subspaces of V is a subspace of V if and only if one of the subspaces is contained in the other.

#incomplete … this got deleted? I guess see [[KBe20math530PremierProofPresentation]]-export.pdf

Working it out

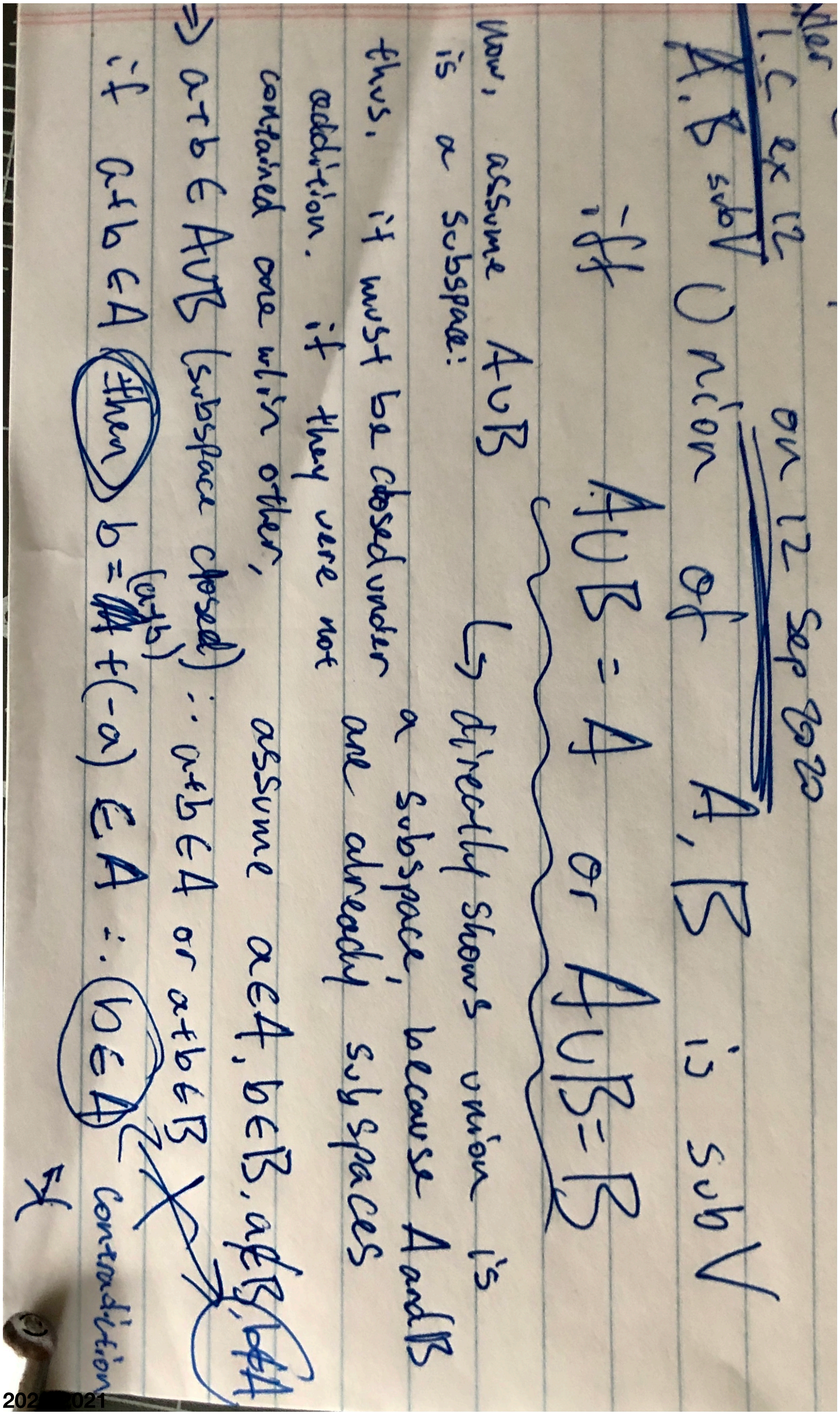
1.C ex 12 on 12 Sep 2020
A, B sub V Union of A, B is sub V
iff A∪B = A or A∪B = B
Now, assume A∪B ↳ directly shows union is
is a subspace: a subspace, because A and B
thus, it must be closed under are already subspaces
addition. if they were not
contained one w/in other, assume a∈A, b∈B, a∉B, b∉A
⇒ a+b ∈ A∪B (subspace closed) ∴ a+b∈A or a+b∈B
if a+b∈A then b = (a+b)+(-a) ∈ A ∴ b∈A contradiction

Figure 1: Scribbles