HOMEWORK 2

1. From [Ush]: 3.22*, 4.4*, 4.11*, 4.12*, 4.20*
2. Let V be an n dimensional vector space.
   (a) Suppose $v_1, \cdots, v_p \in V$ are linearly dependent. Prove that $\eta(v_1, \cdots, v_p) = 0$ for all $\eta \in \wedge^p V^*$.
   (b) Prove that $v_1^* \wedge \cdots \wedge v_p^* = 0$ iff $v_1^*, \cdots, v_p^*$ are linearly dependent.

References

[Ush] Mike Usher, *8210 lecture notes*.