Set 5
Due on November 21, Tuesday

- page 325: 12-6, 12-7
- Prove Proposition 12.15.
- Let $\alpha$ be a covariant tensor on a finite dimensional vector space $V$, i.e., $\alpha \in V^* \otimes \cdots \otimes V^*$. Show (a) $\text{Alt} \alpha$ is alternating, (b) $\text{Alt} \alpha = \alpha$ if and only if $\alpha$ is alternating.
- page 373: 14-1, 14-6.

Read 14-4, search Cartan’s lemma (in terms of contravariant tensors), and then compare with 14-5. You don’t need to hand in results of your search.