

1. 14-A
2. 14-B
3. 14-E
4. 15-B [You don't need to prove the more general statement.]
5. Let ξ be an n -vector bundle over B given by the data $\{(U_\alpha, g_{\alpha\beta})\}$ (Here $\{U_\alpha\}_{\alpha \in I}$ gives an open covering of B where for any $\alpha \in I$, $\xi|_{U_\alpha}$ is trivial, and for any $\alpha, \beta \in I$, $g_{\alpha\beta} : U_\alpha \cap U_\beta \rightarrow GL(n, \mathbb{R})$ is a transition function of ξ . Show that ξ^\vee (dual of ξ) is given by the data $\{(U_\alpha, (g_{\alpha\beta}^{\text{tr}})^{-1})\}$ (tr means matrix transpose).